

Talk of the Month: Opportunities to build resilience to a changing climate

Agriculture plays a major role in national economies in Central America. Together with livestock and including the agro-industry, it represents around 18 per cent of the total GDP.¹ It is also the main food supplier and produces 35 percent of the isthmus exportations.² Smallholder agriculture accounts for more than 60 percent of agricultural outputs.³ Therefore, it has a significant potential to contribute to food security and poverty reduction and promote rural development.

However, households dependent on agriculture activities are particularly vulnerable to poverty: basic staple crops – especially maize and beans – are sold at low price because smallholder farmers are not able to access more profitable formal markets.

Moreover, the agriculture sector is particularly vulnerable to natural disasters. Central America ranks amongst the most disaster-prone areas in the world, experiencing recurrent natural hazards, such as hurricanes, floods, droughts, earthquakes and landslides, with hydro-meteorological events periodically worsened by El Niño phenomenon. It is estimated that climate change will intensify extreme events while increasing irregularities in rain patterns and temperatures. The region has a high risk to lose crops as a result of natural disaster, aggravated by a growing vulnerability of crops to pest and disease.

This adds pressure on smallholders' farmers many of whom cultivate marginal lands already stressed by environmental degradation and poor land use.

Despite these vulnerabilities, smallholder agriculture has the potential to play an important role in promoting food security and stimulating rural development. This will depend on farmers' ability to invest in more productive, weather resistant and sustainable agriculture technology, access to risk management tools and to profitable markets. For the Rio +20 Summit, FAO, IFAD, WFP, Biodiversity issued a joint statement stressing the need to "build resilient livelihoods and landscapes".⁴ The P4P experience in Central America has revealed opportunities which contribute to building resilience among smallholders' farmers facing recurrent disasters and climate variability.

In this bulletin, we focus on the opportunities that P4P offers regarding to:

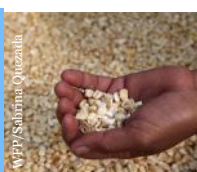
- 1 Promote climate-resilient agriculture;
- 2 Leverage a wide network of partners and capacity building activities to strengthen farmers' organizations' (FOs) capacity to manage risks;
- 3 Facilitate access to markets and increase household incomes.

1. Istmo Centroamericano: efectos del cambio climático sobre la agricultura, 2010, CEPAL

2. Ibidem

3. Smallholder farming key to development in Latin America and the Caribbean, IFAD, http://www.ifad.org/events/op/2009/editorial_brazil.htm

4. See FAO, IFAD, WFP, Biodiversity Joint statement on Rio +20 Summit: No sustainable development without eradication of hunger and extreme poverty- <http://www.ifad.org/events/rio/resources/statement.htm>



“We must recognize that individuals and the private sector make the bulk of investments in our food systems. The people who work the world's 500 million small farms are the backbone of many rural economies, and are the largest investors in agriculture in the developing world. They are also custodians of a large part of the world's natural resources and biodiversity. They have enormous potential as entrepreneurs, but all too often lack the resources they need to thrive, feed their families and contribute to the food and nutrition security of others.” **Joint statement by FAO, IFAD, WFP, Biodiversity on Rio + 20 Summit**

The promotion of climate-resilient agriculture

Central America's vulnerability comes from a combination of environmental degradation (deforestation, pollution...) and bad agricultural practices, resulting in soil erosion, flooding and loss of soluble nutrients in the soil, among others. This aggravates the impact of recurrent disasters and impedes quick recovery. Faced with these challenges P4P in Central America, jointly with its partners, has promoted climate-smart agricultural practices to help build climate resilience and enhance biodiversity. These include no-till farming, integrated pest-management and drip irrigation.

In **Guatemala**, for example, P4P and IICA promote zero tillage: it mitigates soil erosion, improves fertility and water-holding capacity. Through training sessions and demonstration plots, farmers learn how to change their practices and stop burning the plant residues, as they used to.

Another example of sustainable practice encouraged through P4P is multiple cropping. In both **El Salvador** and **Guatemala**, it is promoted to obtain good yields and diversify marketing options. It also improves the nutrient status of the soil and helps control erosion through a more efficient use of land. For example, a mixed cropping of maize with beans replenishes the soil because beans provide soil with the nutrients necessary for the maize to grow.

In **Honduras**, more than 100 field schools have been set up to promote sustainable agriculture principles and to improve farmers' knowledge on soil conditions and on respectful methods to work on it.

In **Honduras**, P4P, jointly with Training Centre for Agriculture Development (CEDA, for its Spanish acronym), has established a demonstration plot for the implementation of an irrigation park to address the problem of inefficient use of water. This parcel is used to train farmers on appropriate water management practices, according to the needs of each crop.

Finally, an example from **Nicaragua**, where there is a strong emphasis on integrated pest management: in cooperation with INTA, farmers are trained on pest control that relies on an intelligent selection and use of actions, including preventive cultural practices, monitoring and control as well as responsible use of pesticides. In **El Salvador** and **Honduras**, smallholders use green pesticides.

These are some examples of some “no regrets” actions conducted in the region: actions that help strengthen climate resilience, while having at the same time development benefits.

Networking and institutional building to strengthen smallholders' capacities to manage risks

Since its launch in 2008, P4P has built a wide network of partners that offer their expertise and resources to support smallholders' farmers to overcome the main challenges along the value chain. The continued engagement with a broad range of partners (including government institutions, NGOs, UN agencies, universities, specialized institutions, regional entities...) created trust and enabled the establishment of strong cooperation mechanisms. WFP and partners were able to provide tailored and timely support to farmers, even in unexpected situations. For example, in 2010 and 2011, in **Honduras**, maize crops were affected by a disease called tar spot, caused by a fungus and triggered by stress conditions including sudden temperature changes and humidity and considered as a direct consequence of climate change. To support farmers managing this new risk, P4P relied on DICTA and SENESA (the National Service of Agriculture Health, part of the Ministry of Agriculture and Livestock) as well as on agro-commercial companies to train farmers on the origins of the disease and how to prevent and cure it, so it wouldn't affect productivity. The same happened this year in northern **Guatemala** where P4P coordinated with IICA, ICTA, MAGA and the University San Carlos of Guatemala to mitigate the impact on production.

Additionally, capacity development conducted under P4P can create favorable conditions within FOs to better manage risks and respond to shocks. P4P and its partners are strengthening FOs organizational and management structure, so they can adopt a more business-driven approach, including evaluation and consideration of different types of risks. When the Tropical Depression 12E hit **El Salvador** in October 2011, P4P farmers' organizations were able to mitigate the impact on the harvest and recover a significant amount of affected crops by distributing material and equipment to rescue affected crops. The P4P experience in collective action has given FOs the capacity to act as important units at community level to prepare for and respond to emergencies. A concrete example would be the preposition of materials and training of FOs to quickly respond in case of disaster. In **Guatemala** and **El Salvador**, P4P and MFEWS are working on the implementation of crop monitoring systems that will enable the Ministries of Agriculture and FOs to control rainfalls patterns and temperatures, facilitating decision-making processes to reduce climate-related crop losses.



WFP/Francisco Fion

A facilitated access to market to secure households incomes



WFP/Sabrina Quezada

Finally, P4P contributes to improve the household resilience to disasters by using WFP's procurement to provide a reliable market outlet, facilitate access to other markets and increase incomes. Since 2008, WFP in Central America has been able to purchase a total of 44,567 metric tons (mt) of food commodities from smallholder farmers, representing an investment of US\$ 24.25 million in rural economies. Smallholders are economically stronger to respond to shocks and to invest more in their production. Their grain is being distributed under WFP traditional food assistance programmes, including school feeding or emergency response.

P4P farmers can also supply grain to WFP to preposition of stocks to enable immediate food deliveries when a disaster hits the region.

With the growing experience gained through P4P implementation in Central America countries, there is increasing awareness of the potential of the initiative to contribute to increase resilience and climate-related risk management actions. However, the P4P Initiative was not designed specifically as a disaster risk reduction or climate change adaptation project, and consequently, it does not offer an integrated approach to risk management. Undoubtedly, though, P4P offers opportunities to reach rural communities and to work with key partners to strengthen farmers' resilience.

EL SALVADOR

FOs	18
PRODUCERS	4,706
% WOMEN	40
CONTRACTED (MT)	4,301
TOTAL VALUE (\$)	1.9 M
TRAININGS	1,069
PARTICIPANTS	10,774
PARTNERSHIPS	18

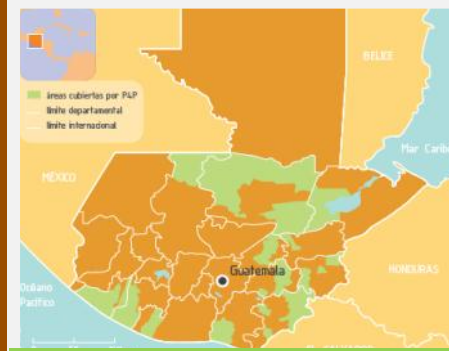


- ◆ Coordination meeting between WFP/CENTA/MFEWS to follow up the implementation of the Crop Monitoring System.
- ◆ Coordination meeting with the Ministry of Education to study the feasibility of WFP purchasing locally to FOs, within the framework of the Government's School Feeding Programme
- ◆ Workshops organized with 18 FOs representatives to validate P4P lessons learned and best practices
- ◆ Coordination meeting with the IFAD funded project, PROMEDER, to monitor investments and coordinate implementation

Key Partners: Howard G. Buffett Foundation, DISAGRO & FERTICA, El Salvador Chamber of Commerce, FAO, Ministry of Agriculture and Livestock, the National Center for Agriculture and Forestry Technology (CENTA), PREMODER & PRODEMORO (IFAD-financed rural development programs), CARITAS undation, UNDP, World Vision.

GUATEMALA

FOs	67
PRODUCERS	9,752
% WOMEN	53
CONTRACTED (MT)	17,648
TOTAL VALUE (\$)	8.1 M
TRAININGS	608
PARTICIPANTS	34,309
PARTNERSHIPS	46



- ◆ Up-date and analysis of FO records of the 67 P4P FOs, in coordination with IICA to assess their level of development and allow the FOs to carry out an auto evaluations and implement improvements
- ◆ Coordination with IICA to ensure effective insertion of gender equality in the agricultural assistance component
- ◆ BANRURAL approved credit for commercialization for two P4P FOs that have an approved purchase process of maize with WFP
- ◆ Meeting with the private company DEINSA for commercialization of beans from 6 FOs (HGBF)
- ◆ Evaluation with IICA of results for the first year of technical assistance provided to FOs in northern and eastern Guatemala (CIDA and HGBF)

Key Partners: Howard G. Buffett Foundation, Canadian International Development Agency (CIDA), BANRURAL, Catholic Relief Services (CRS), DISAGRO, FAO, Inter-American Institute for Agricultural Cooperation (IICA), International Maize & Wheat Improvement Center (CIMMYT), Ministry of Agriculture (MAGA), National Institute for Agricultural Commercialization (INDECA), Institute for Agricultural Science and Technology (ICTA).

HONDURAS

FOs	23
PRODUCERS	11,365
% WOMEN	23
CONTRACTED (MT)	19,875
TOTAL VALUE (\$)	13.1 M
TRAININGS	715
PARTICIPANTS	29,551
PARTNERSHIPS	20



- ◆ MoUs were signed with CIEN- Business Pulses Centre, Funda COLPROCAH (Honduras agriculture school foundation), Swiss contact foundation, and 2 FOs (Unioyol and Fuente de Vida) for the development of field schools focusing on Good Agricultural Practices, administrative and accounting training
- ◆ A new agreement with UN Women was signed to ensure continued support in gender mainstreaming
- ◆ The Data Analysis and Knowledge Management Hub (DAKMAH) provided a training session on quantitative surveys to P4P and DICTA staff, with a special focus put on FOs follow-up surveys
- ◆ The agri-business and the agricultural extension certified studies were concluded

Key Partners: EUFF, Howard G. Buffett Foundation, CHOOPACYL Credit & Savings Cooperative, CRS, FAO, Government of Honduras, IICA, IFAD/PROMECOM, INA, Ministry of Agriculture, National Agricultural Development Bank (BANADESA), DICTA, National Institute for Professional Formation, Prolancho Foundation, SAN Coalition Network, UN Women, FAO, SAN Red Coalición.

NICARAGUA

FOs	10
PRODUCERS	2,100
% WOMEN	30
CONTRACTED (MT)	2,743
TOTAL VALUE (\$)	1.06 M
TRAININGS	828
PARTICIPANTS	13,742
PARTNERSHIPS	11



- ◆ P4P field technicians have been monitoring FOs' warehouses to ensure maize quality
- ◆ Field school sessions conducted by INTA providing training to technicians, promoters and farmers (how many?)
- ◆ P4P participated in the XI session of the SICTA network
- ◆ Meeting of UN Women and MAGFOR to improve coordinated work on gender issues
- ◆ Meeting with APEN (Association of Producers and Exporters of Nicaragua), to discuss a possible cooperation on the definition of trading strategies for each FO.
- ◆ Participation in the meeting of the Production Council of Quilali, where farmers discussed major problems faced in terms of lack of access to production, marketing, technical assistance and purchase of inputs

Key Partners: Howard G. Buffett Foundation, FAO, Food Technology Laboratory (LABAL), IICA, International Regional Organization for Animal and Plant Health (OIRSA), Ministry of Agriculture, Nicaraguan Institute for Agricultural Technology (INTA), UCA.



This month, we interviewed William Vigil, Emergency Preparedness and Response Programme Advisor for the WFP Regional Bureau for Latin America and the Caribbean, established in Panama. William explained to us what disaster-related risks are faced by communities in Central America, and how they can build resilience.

How are smallholders' farmers affected by climate variation in Central America?

In Latin America, a third of the population is vulnerable to natural disasters. An important part of this population lives in marginal rural areas with low incomes and is recurrently affected by disasters, which are more and more frequent as a consequence of climate change. Among the most vulnerable are the people whose livelihoods depend on agriculture: daily labourers and smallholders' farmers. For example, in Honduras, the planting and harvest periods coincide with the rainy, hurricane and dry seasons. Last October, when the Tropical Storm 12 E hit the southern part of the country, it affected large and small scale farmers who lost an important part of their crops. When large scale farmers are affected, there are also consequences on the level of employment of day labourers and on their incomes.

William Vigil
Emergency Preparedness
and Response
Programme Advisor
WFP

How are they adapting to these changes? How are they managing risks?

As a result of Hurricane Mitch, in Central America, we are learning how to coexist with extreme situations. Vulnerable populations are trying to take actions to mitigate the impacts of disasters, but there are not enough resources, discipline, policy implementation and technical assistance to be able to develop integral activities with increased coverage. Nonetheless, small sectors of the population have been trained on risk management. In Guatemala, Santa Maria Solola is a very good example of what a resilient community can be. In this community where WFP had been working for 5 years –and stopped working 10 years ago- the population has learned how to use land, water and other resources adequately. This has enabled the population to mitigate the effects of hurricanes and droughts and even, to reach improved levels of economic welfare. This illustrates how resilience has been built little by little (nowadays this community even produces food surpluses) and is a perfect example of what can be done in Central America.

According to you, what are the opportunities that P4P offers which can contribute to improved risk management?

P4P is an excellent initiative to work with smallholders' farmers and support them in improving their organizational capacities. It has shown important results. Developing a resilient community is a new concept, and there are only a few communities that can be categorized as totally resilient. A resilient community could, for example, the capacities installed within the P4P farmers' organizations so they can serve as a point of reference at the community level when a disaster occurs. Also, the P4P network of partners could be used to obtain credits or crop insurance as well as to develop disaster mitigation activities and promote sustainable agricultural practices at the family level.

What else is needed to better manage risks?

The biggest challenge is to scale up our interventions. Good practices have to be shared not with 5,000 farmers or beneficiaries, but rather with 50,000 or 500,000 to achieve building "Resilient Communities".

P4P CENTRAL AMERICA	
BENEFICIARIES	
FARMERS' ORGANIZATIONS	118
PARTICIPATING PRODUCERS	27,635
% WOMEN	37
P4P PURCHASES	
TOTAL CONTRACTED (MT)	44,567
TOTAL VALUE (US\$)	24.16 M
% OF TOTAL PURCHASES	16.75
TOTAL COST SAVINGS FOR WFP	3,058,970
CAPACITY DEVELOPMENT	
PRODUCTION TECHNIQUES & INPUTS	1,129
POST-HARVEST MANAGEMENT	835
COMMERCIALIZATION	129
FINANCIAL MANAGEMENT	282
FO ADMINISTRATION	654
GENDER	81
OTHER	110
TOTAL	3,220
TOTAL PARTICIPANTS	88,376
PARTNERS	
GOVERNMENT INSTITUTIONS	38
UN AGENCIES	6
PRIVATE SECTOR	8
NGOS	31
OTHER	12
TOTAL	95

Month Ahead

- ◆ **Central America:** Follow up on the Learning & Sharing- Clear definition of themes to be documented by each country.
- ◆ **Central America:** Participation to the video conference "Managing Knowledge to improve access to market", organized within the framework of the IICA, C-CAC, RUTA initiative to connect farmers to markets.



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