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Central American farmers seek buffers against climate change

Danielle Marie Mackey | Oct. 27, 2012
SAN SALVADOR EL SALVADOR

In 2009, El Salvador was not only the most vulnerable country in Central America to climate change -- it was No. 1 in the world.

In the past several years, natural disasters have hit the country with increasing frequency. Their intensity and duration have risen exponentially, as well as their cost.

The total economic loss from three of the five storms in 2009-2011 is estimated at some $1.3 billion, with much of that coming from lost crops.

"With climate change, we face a challenge much greater than we ever could have imagined a few decades ago," Salvadoran Minister of the Environment Herman Rosa Chávez said at an Oct. 11 conference announcing a new study on the impact climate change will have on countries in the region. "Each year that we do not act is one more year of losses."

Storms are not the only problem. An increased frequency of uncommon weather patterns has had a wide impact. This year, for instance, drought ravaged farmers both in the United States and in Central America -- prompting fears of a worldwide spike in food prices.

This combination of events causes serious consequences for people who do not have access to economic or institutional buffers, like insurance, that enable them to survive this type of shock.

In Central America, the livelihoods of a million small-hold farmers of maize and beans, the region's staples, will be at risk. The food security of the region is under threat.

That problem is the subject of the new study "Tortillas on the Roaster," an effort of Catholic Relief Services (CRS), the International Center for Tropical Agriculture, and the International Maize and Wheat Improvement Center.

The study, funded by the Howard G. Buffett Foundation, focuses on Nicaragua, Honduras, El Salvador and Guatemala.

In a keynote address at the Oct. 11 conference, Rosa Chávez argued that the road to environmental change must be a different one than it has been in the past.

"This cannot be another green revolution with the same logic of a technological cure. That just kills us slowly and patiently," Rosa Chávez said, referring to transgenic seeds and chemical fertilizers that have been forcefully marketed to Central American farmers in past decades.

That approach has been widely criticized for harming plant biodiversity and locking small farmers into unaffordable production cycles.

"The temptation to be convinced by a new technological cure is ever-stronger today," Rosa Chávez said.

Rosa Chávez's concerns are echoed in the "Tortillas on the Roaster" study, which aims at addressing how small farmers and others at the local level can prepare to adapt to climate change.

"Until now, climate change projections for Central America have been general, covering wide geographic areas," the study's executive summary states. "As a result, smallholder farmers and other decision makers have been slow to adapt adequately to the threats of climate change. They know that climate change is occurring, but they do not have enough detailed information to act on it."

"Tortillas on the Roaster" aims at filling this knowledge and action gap first by providing detailed climate projections for areas of 5 square kilometers or smaller in this four-country region, within two distinct time frames: 2010-2039 and 2040-2069.

It looks at the impact of higher temperatures and changing rainfall patterns on the countries' most important crops, beans and maize. The study then provides "detailed, actionable information for specific areas" directed at small farmers, extension agents, the development community and policymakers.

If adaptive measures are not put in place, the report predicts, the four countries will lose about $20 million a year through lowered maize and bean production by 2020. Maize production could be cut by one-third and bean production by as much as 25 percent, according to the report. This would affect local markets as well as export markets.

The report highlights the importance of environmental management. It says, for example, that farmers who employ good soil and water management practices and crop diversification will be able to mitigate the effects of climate change in an economically sustainable way.

"There has been such an emphasis on chemical farming, for example in El Salvador, that many farmers can tell you more about the names of the pesticides that they use than about the macro and micro nutrients that are critical for plants," Paul Hicks, regional coordinator of CRS' Global Water Initiative-Central America project, said at the Oct. 11 conference.

"What the report emphasizes is that the solution is instead biological and ecological. The answer is to build human capital through vibrant and effective agricultural extension services; we want farmers who have a very good understanding of basic agronomy, soil, water and plant management."

The hope is that the information provided in "Tortillas on the Roaster" can be put into practice as soon as possible.

"This study has the possibility to truly make an impact in the entire region of Central America if it is used well, if it is used to make the actors act," Emily Martin of the Howard G. Buffett Foundation said at the report's release.

CRS plans to push for action by making strategic alliances with local and national government institutions, nongovernmental organizations, and small farmers around the region.

"We recommend that the information be used as a guide to leave behind uncertainty, and to begin right now to invest in education and research to strengthen human capital," said Axel Schmidt, CRS' project coordinator for

the study.

Hicks said that a key concern is also convincing U.S. Catholics that their actions impact those in the global south.

"Between now and 2050, the consensus projection is that there will be a need for between 70 percent and 100 percent more food to meet global demand," Hicks said.

"And yet, we consume far more food in the U.S. than we actually need, and an estimated 30 percent goes to waste. ? We have a responsibility to reduce waste, to be conscious about our food choices."

The International Center for Tropical Agriculture is based near Cali, Colombia. It conducts research for sustainable and economically reliable development in tropical regions of Latin America, Africa and Asia.

The International Maize and Wheat Improvement Center, headquartered outside Mexico City, is a nonprofit agriculture research and training organization that maintains the world's largest maize and wheat seed bank.

Catholic Relief Services is the official international humanitarian agency of the Catholic community in the United States.

For more on the "Tortillas on the Roaster" study and to read a full copy of the report, click here [1].

[Danielle Marie Mackey is a freelance journalist and interpreter living in San Salvador. *NCR* staff contributed reporting to this article.]

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