

Reducing Agricultural Sector Financial Vulnerability to Disasters in Mexico

Hazard(s): Floods, droughts, hurricanes, heavy rains, landslides, earthquakes, hail

Geographic scope: Mexico

Keywords: Disaster impacts, disaster mitigation, crop insurance, agricultural policy



Crops and human settlements devastated and flooded after four days of rains caused by Hurricane Stan, Tapachula, Chiapas. Courtesy of Alfredo Domínguez, La Jornada. October 8, 2005

Project Summary

The increasing number and severity of natural disasters in Mexico is particularly affecting the agricultural sector, which provides livelihood of most the rural poor. In the absence of an active strategy to reduce vulnerability, poverty and emigration are growing along with social instability.

The purpose of this research was to analyze the financial vulnerability to natural disasters in Mexico's poorest areas and potential ways to reduce it.

The research considers structural vulnerability (i.e. ancestral poverty, production processes) as well as policy practices that prevent penetration of financial instruments (insurance) and loss-sharing mechanisms (contingency funds) to cope with disasters. Social and agricultural policy assessments are used as well as interviews with policy-makers, farmers' leaders and authorities. The information provided by the Ministry of Agriculture (SAGARPA) and the state-owned crop insurance company (AGROASEMEX) was crucial to assess rural development policy, insurance markets, and funds operation. The data access facilitated by the Ministry of Social Development (SEDESOL) was the cornerstone for a cross-section analysis of socio-economic and climatic vulnerability. Based on a budgetary and geographic analysis, this research also identifies potential areas to invest in public works for disaster mitigation and at the same time tackle poverty.

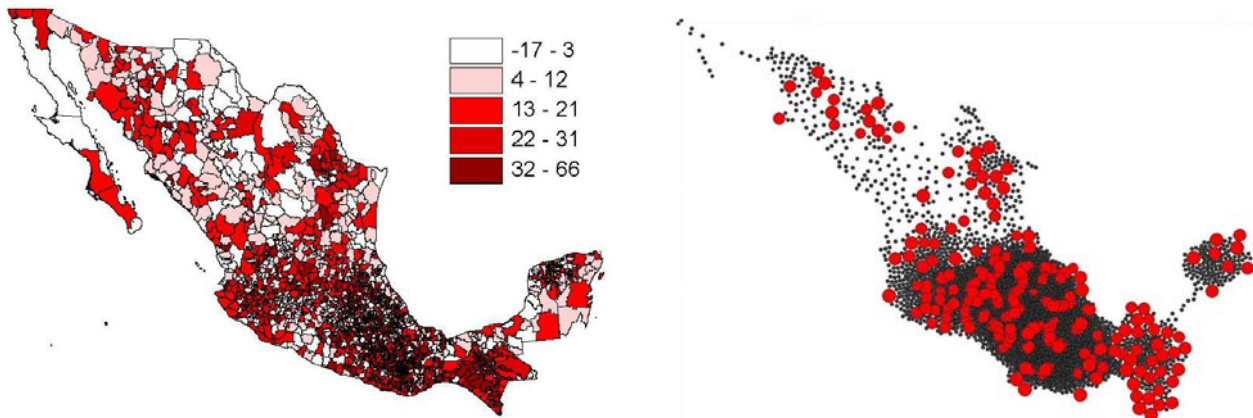
Key Findings

The following strengths characterize the public response in Mexico:

- Governmental planning for natural disasters embraces measures with novel and innovative designs for practically all disaster-risk types. These measures include micro-insurance (Fondos), federal-state shared funds for prevention (FOPREDEN) and reconstruction (FAPRACC), and public infrastructure rebuilding (FONDEN), among others.
- The current administrative decentralization is transferring disaster-prevention responsibilities to state and municipal (local) administrations, allowing for more community-based identification of needs.

The project identified the following challenges to disaster risk reduction:

- The decentralization process has transferred responsibilities to local administrations exceeding their capacity. It has led to the under-utilization of existing disaster-prevention programs.
- The *Fund for Climatic Contingencies in Rural Areas* (FAPRACC), operated by SAGARPA, spends most on indemnities for reconstruction (which is never enough) and a negligible share is spent on prevention, which is really needed.
- Support for agricultural insurance premiums and rural mitigation works are unequally earmarked: more resources are spent on medium and large-scale farmers than on small farmers; geographically, the relatively most impacted regions in the South of the country receive less as well.
- The most high-exposed/less-prepared local administrations ignore the existing federal managed risk-reduction programs as well as lack prepared personnel for risk identification and to apply for financing.



During the period 1990-2000, poverty increased particularly in the South and Center of the country, where economic losses from natural disasters have been higher.

Left: Percent increase in share of municipal population living on less than 2 USD a day (1990/2000)

Right: Cartogram of economic losses from natural disasters 1991-2000. Red circles represent disasters events exceeding 500,000 USD (2002 prices) (Author's results using data from INEGI, La Red and CENAPRED)

Recommendations for the federal government

- Encourage municipalities and states to carry out individual disaster-prevention projects, setting mandatory deadlines for those most risky states and municipalities.
- If they do not respond in time, the Federation should undertake the corresponding projects.
- Develop a methodology to identify socioeconomic vulnerability, particularly aimed at local administrations.

Recommendations for state governments

- Elaborate cross-tables of climatic risk and socioeconomic vulnerability (embracing poverty and inequality) in order to identify and reach the most vulnerable population.
- Give priority to those disaster-reduction projects that simultaneously increase regional productivity and reduce poverty.
- Plan a reorientation of production to adapt to current climatic conditions.

Recommendations for the municipal governments and community leaders

- In coordination with the state government, train personal on disaster-risk identification, as well as on access to and financial management of public programs.
- Consult the community to capture risk perception and identify real needs and realistic solutions.
- Detail municipal maps of risks for projecting and monitoring and share these with other government entities and scientific/academic community as feedback for updating existing geographic data bases.



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This product is part of a series describing short-term research and implementation projects funded through the Applied Research Grants for Disaster Reduction Programme, an initiative managed by the ProVention Consortium as a collaborative initiative with the University of Wisconsin Disaster Management Center, the Asian Disaster Preparedness Center in Bangkok, and the Disaster Mitigation for Sustainable Livelihoods Programme at the University of Cape Town. See www.proventionconsortium.org/grant_projects for a list of all projects. To learn more about other ProVention activities, please visit www.proventionconsortium.org.



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