

Stakeholders' Views in Reducing Rural Vulnerability to Natural Disasters in Southern Mexico: Hazard Exposure, Coping and Adaptive Capacity*

Abstract

Mexican rural population is predominantly living in poverty and vulnerable to a number of hazards. Mexico is very prone to natural disasters, and global environmental change may be contributing to the losses from weather-related disasters. The purpose of this analysis is to examine how natural disasters and liberalized trade affect agricultural livelihoods, their implications upon the rural poor, and their influence on migration patterns. In addition, this project aims at assessing policy options to reduce the vulnerability of small-scale farmers (e.g. government-supported insurance schemes) within the framework of the governmental withdraw from subsidizing the agricultural sector over the past 18 years, investigating farmers' coping and adaptive strategies as well.

Key words: vulnerability, poverty, natural disasters, trade liberalization, and subsidy allocation.

Introduction

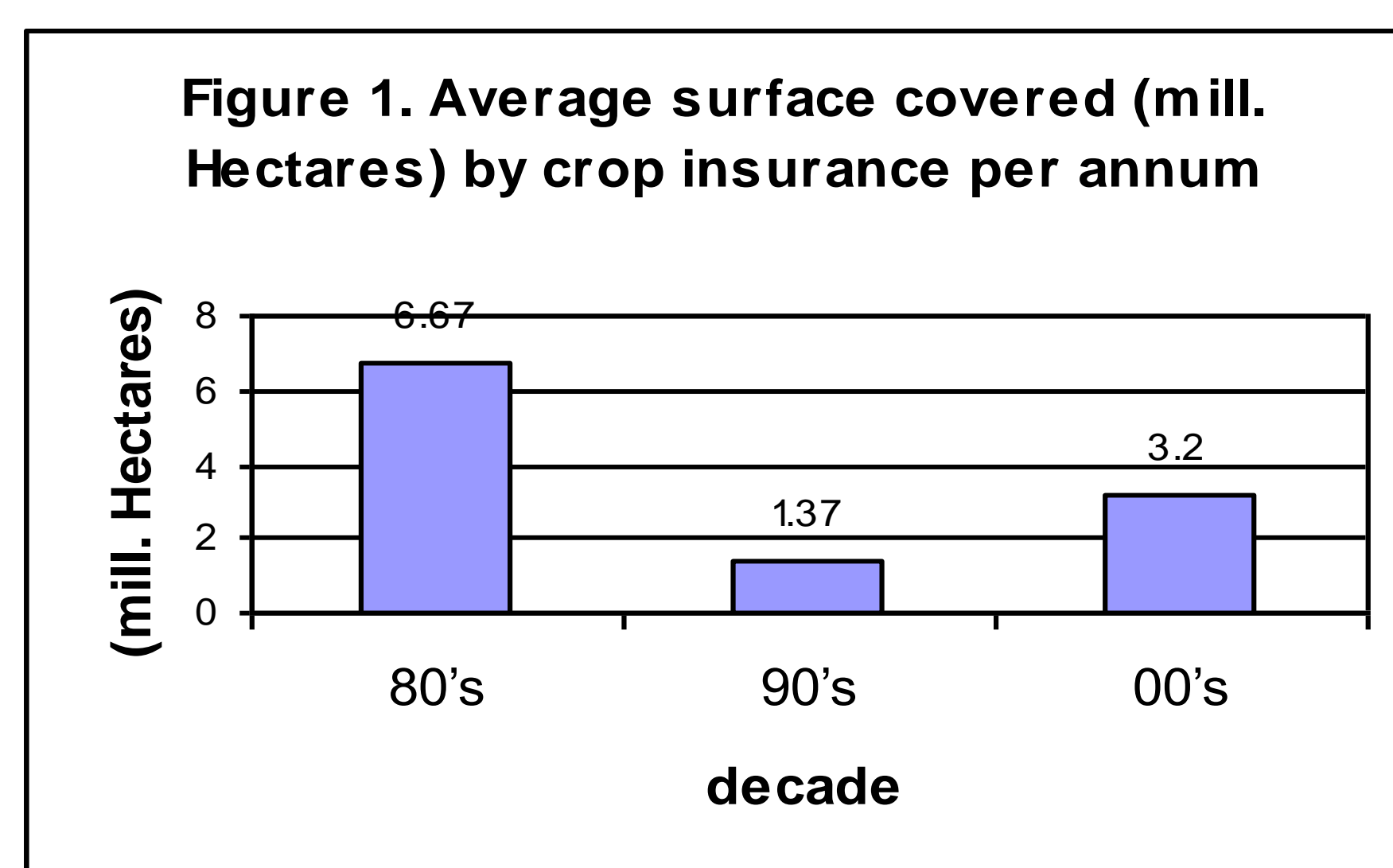
Although from the macro-economic perspective losses from natural disasters do not cause serious negative consequences to the country as a whole, the agricultural sector is remarkably vulnerable: **68% of the rural-poor workforce is employed in agriculture, absorbing ca. 70% of economic losses from natural disasters** in the country during 1980-2000. In addition, **trade liberalization has only resulted in a negligible increase in production to Mexican agriculture, while it has contributed to increased income uncertainty of small farmers living in poverty**, given the rise in imports and depressed prices of agricultural products. Although natural disasters and trade liberalization are not the only factors contributing to poverty in Mexico, they are becoming more socially and economically destructive as they drive small-scale farmers out of business and stimulate farmers to leave their communities.

Methodology

This work makes use of stakeholders' consultation (September 2004-February 2005) and descriptive analysis in three communities in costal areas in the State of Chiapas, presenting how subsistence agricultural livelihoods cope with natural hazards and adapt to stressors derived from liberalized trade, and suggesting stakeholders-based solutions. These results are part of a broader project comprising cross- sector and spatial econometric analysis aiming at suggesting options for reducing vulnerability in the Mexican economy to global economic and climatic change.

Discussion

The three communities surveyed, *Escuintla*, *Cacahoatan* and *Cintalapa*, have recurrent affectation from natural disasters, high marginalization conditions and subsistence agriculture is the predominant livelihood. Also, hard cropping conditions characterize them, such as extremely small landholding, low technology usage, scarce access to credit and insurance, as well as they rely on mono-crop agriculture at a large extent. **Despite the existence of sophisticated public instruments to deal with natural disasters in Mexico, subsistence farmers continue highly vulnerable to climatic events.** There is a lack of risk identification at community level, what has led to frustrate disaster prevention plans. For instance, disaster mitigation works rely on initial risk analysis, what misses in most Mexican municipalities. These surveyed communities suffered of flooding and avalanches in 1998 (see pictures), and lack of prevention measures led to repeat the tragedy when tropical storm Stan hit Chiapas on September 2005. Though the governmental withdraw from the agriculture has meant a sound fiscal balance, **agricultural surface covered by crop insurance has decreased dramatically from 6.67 in the 80's to 3.2 million hectares after 2000** (see figure 1).

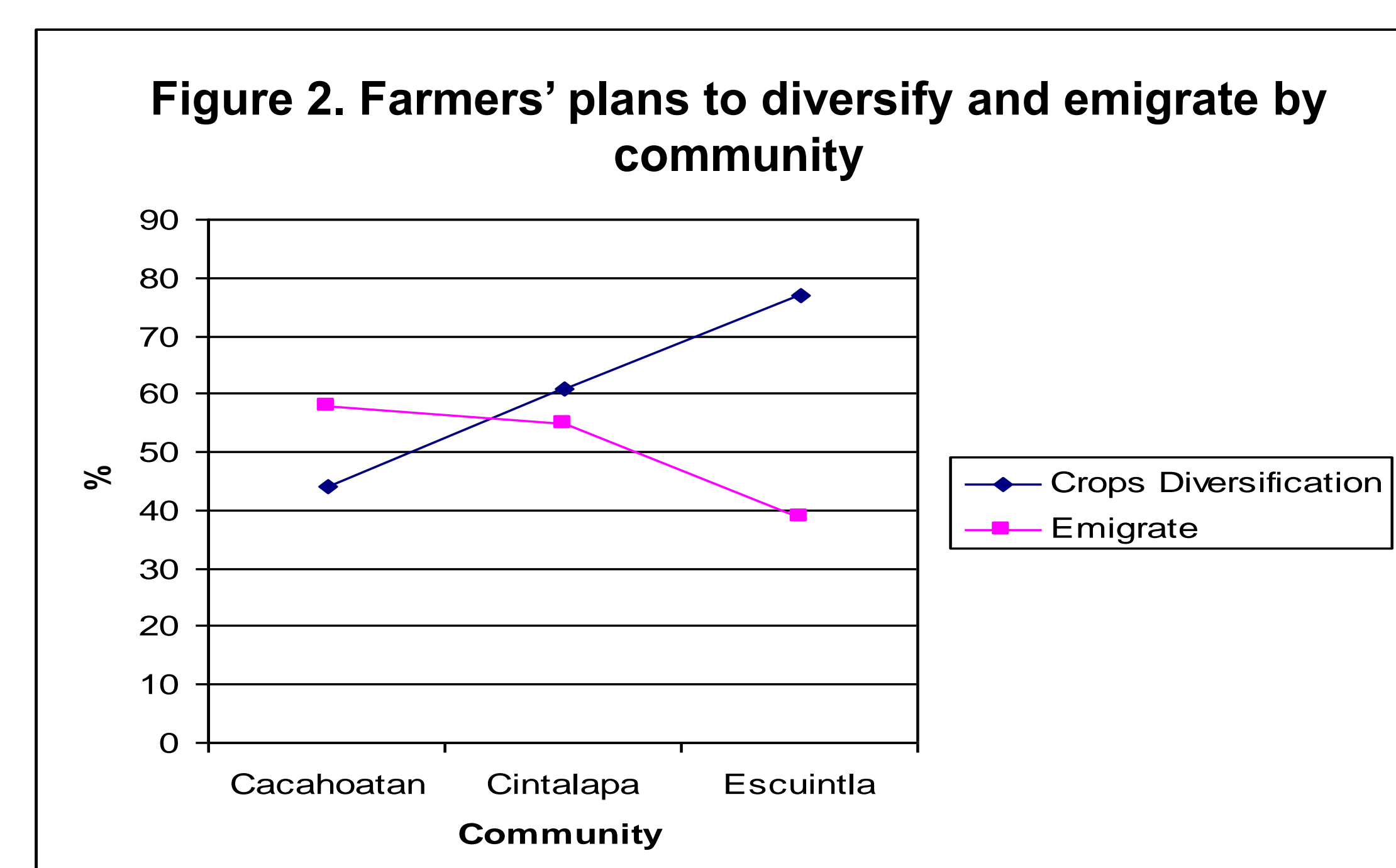


Data source: AGROASEMEX 2003

(*)00's are estimations corresponding period 2000-2003

Mono-crop agriculture is also affecting these farmers, as their **main products' price (maize and coffee) has decreased dramatically over the past 20 years along with the dismantling of the public companies aimed at assisting them** with commercialization, storage, inputs, insurance, and credit (i.e. CONASUPO, AGROASEMEX, INMECAFE, BANRURAL, etc.). Despite efforts from the Mexican Ministry of Agriculture for production reorientation to more profitable and/or diversified agriculture, it still needs more penetration.

As consequence, **a growing share of farmers make use of off-farm sources of income**, such as the construction industry, rural services and remittances. Emigration is increasing in these communities, where **41% of interviewed stated current plans to emigrate (40% to the USA), 77% of them highly affected by disasters over the past 10 years**. The higher the propensity to emigrate, the lower the crops diversification plans in community farmers' (see figure 2).



Conclusions

Low rural incomes in these communities are result of a complex economic-climatic process, whose solution should embrace not only social programs and post-disaster aid, but also issues of equity, productive reorientation and implementation of disaster prevention instruments. In the stakeholders' views, there is a widespread feeling concerning the absence of an effective and long-term sustainable strategy to strengthen the coping and adaptive capacity of subsistence farmers to extern shocks. The survey finds evidence supporting that **the absence of public intervention in an interconnected manner has limited its scope and effectiveness, what, along with the insufficient promotion from local leaders, is leading the Mexican agriculture to the collapse**. Both farmers and authorities require a better understanding of local needs to optimize the allocation of public resources to reduce vulnerability, as well as to increase the profitability of assets and reduce rural poverty in Mexico, especially as long as trade liberalization and increasing natural disasters occurrence goes on.

Left picture: Cintalapa, municipality of Escuintla, Mexico. When rains in the highlands increase, the river flows through the rocky area, and inundates the community.

Right : Devastated area by the Cintalapa River overflowing in 1998 (below red dotted line)



Left: Meeting with farmers in Cacahoatan to discuss their hazard exposure, coping and adaptive strategies as part of this project.

Right: "travel agency" aimed at transporting farmers to the Mexico-USA border



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