

## The role safety nets as part of adaptation strategies to climate change in Central America

### Studying collective responses to extreme climatic events is fundamental in the design of adaptation strategies in developing countries

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In a climate change context, social safety nets (SSNs) are mechanisms to outspread support to those that have been adversely affected by extreme weather events. These interactions shaped by the government, communities, organized groups, or families are a key component of strategies to minimize expected losses from climate change.

Central America has suffered from large natural disasters that have challenged local and national governments capacities to better manage risk. Safety nets are an important factor in risk management. The traditional concept of safety nets applies to a set of social assistance programs such as cash or in-kind transfers and public works. Still, other informal group-based coping mechanisms play an important role helping households to manage risk. SSNs can be classified as private, for example transfers from family, community members, and institutions; or public which refers to the support that individuals expect from the government.

In Central America safety net programs play an important role in minimizing negative impacts from natural disasters, especially for the poor. However, this instrument and policies such as insurance, community organization, and emergency plans that help ameliorate the consequences of climate change haven't been assessed (Marques, 2003).

In a region like Central America where more frequent and aggressive extreme events are predicted, the risk of suffering losses from extreme events is correlated across individuals in a given landscape, in which case the strategies for adaptation can take a collective action dimension (Dekker, 2004).

A social safety net assessment for Central America, showed that safety nets are mainly focused in helping households directly when affected (idiosyncratic risk), rather than forecasting to assist an entire area (systemic shocks). Local risk-sharing arrangements enable individuals to reduce defensive efforts in the presence of idiosyncratic shocks, but such arrangements may not be effective in the context of systemic effects (Di Falco et al, 2009). Therefore, it is necessary to pool risks over a larger population, and typically this implies a role for the public sector.

#### Key Points

- SSN could lead to a crowding out of private adaptation practices
- Local risk-sharing arrangements may not be effective in the context of systemic effects
- Adaptation decision may differ on the type of safety nets involved:
  - Private: transfers from family, community members, and institutions or
  - Public: referring to the support that individuals expect from the government.

## RESEARCH BRIEF

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For example, governments can invest in large scale projects to deal with the losses from extreme events. Still, governments in general, and developing countries in particular, have a limited capacity to spend. Similarly, the capacity of the safety network to help those that are affected depends on the decision of others to take action from the beginning and on the degree to which risk is correlated between the individuals in the safety net.

Despite their high exposition to extreme weather events, Central American countries lack social protection strategies and when they exist their focus is on helping the poor to cope with crisis rather than prevention (Marques, 2003). In this context, vulnerability studies are needed to highlight sectors and regions with low or lack adaptive capacity to sudden changes in weather conditions as well as gradual changes in patterns of precipitation or dry spells.

## Conclusions

The limit on the capacity of safety nets to cope with systemic risks shows the potential consequences on social welfare of widespread moral hazard. A resourceful interaction between private adaptation and SSNs is crucial in reducing social costs. Researchers at EfD-Central America systematically investigated risk, with the aim of finding ways to increase insurance take-up and to promote cooperation aimed at the prevention of natural disasters, such as flooding. In addition, another project at the Center focuses in identifying and characterizing the adaptation strategies that water community organizations have implemented to historically adapt to drought.

## ABOUT THIS BRIEF

This brief is based on a literature review on exploring the potential of safety nets as part of an adaptation to climate change strategy in Central America.

## FURTHER READING

Dekker, M. (2004). "Sustainability and Resource fullness: Support Networks during Periods of Stress." World Development 32: 1735-1751

Di Falco, Salvatore, Erwin Bulte and Mahmud Yesuf. (2009) Social Capital and Weather Shocks in Ethiopia: Climate Change and Culturally-Induced Poverty Traps. Working paper.

Marques, José Silvério (2003) Social Safety Net Assessments from Central America: Cross-Country Review of Principal Findings. World Bank Social Protection Discussion Paper No. 0316

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