

# Forecast natural disasters syndrome:

## The case of actual situation in Honduras

Produced by: Manuel Winograd



Vulnerability  
Briefing # 3  
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### Introduction:

Information for decision-making and planning needs to go beyond simply monitoring the catastrophic actual effects of natural disasters and the planning of reconstruction after the catastrophe have already occurred.

A first step forward is to analyze what elements and interactions are relevant for the persistence of patterns, or syndromes and the possibility to go from short-term reaction to the immediate consequences, to the prevention of the direct and indirect causes.

For example there is a need to analyze the underlying causes of the situation caused by natural events at national level. In fact, a combination of past problems had an influence on the severity of the impacts of natural events. These problems include inappropriate land use practices, location of population and infrastructures, coastal and watersheds management and a lack early warning systems to prevent and mitigate natural events.

Winograd M., 2002, Natural Disasters in Honduras, TIEMPO, 43 (2):11-14

### The case of Honduras:

In function of the information on probability and magnitude of natural events and the exposure and susceptibility of the environment and society, in the last 100 years, Honduras is highly vulnerable to landslides, flooding and drought.

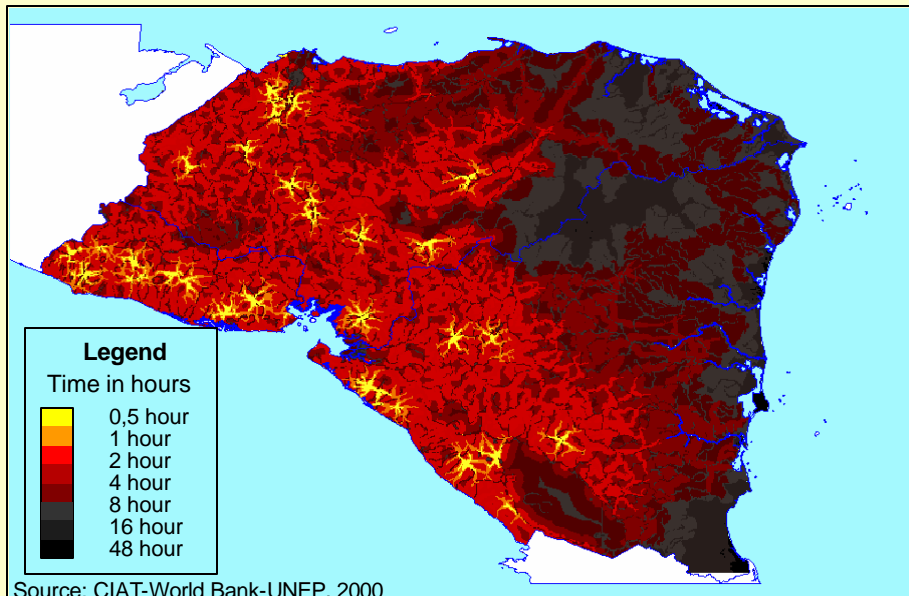
In addition, it exist an agreement between scientist and statistics about the increase in tropical cyclone peak, wind intensity, mean and peak precipitation as well intensified drought and flood associated with El Niño/La Niña.

In fact 50% of the country is at risk of landslides, 30% is at risk of severe droughts and 25% is at risk of flooding, in particular the more populated and agricultural areas, for example the axis San Pedro Sula-Tegucigalpa-Choluteca.

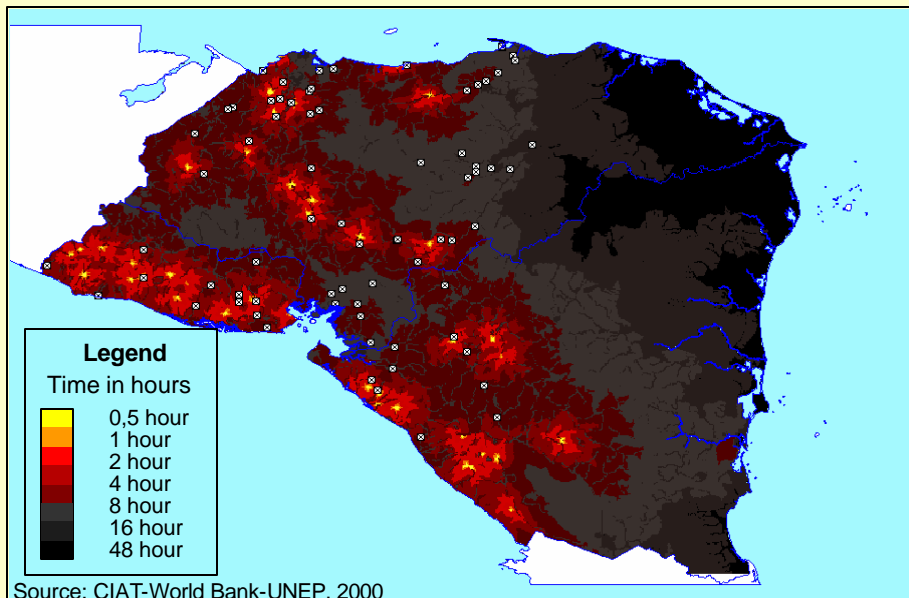
Nevertheless given the high human and economic costs of landslides and flooding (10-20 times higher than drought impacts), these two types of risk are highlighted in this forecast analysis.

Winograd M., 2002, Natural Disasters in Honduras, TIEMPO, 43 (2):11-14

## Forecast the syndrome...

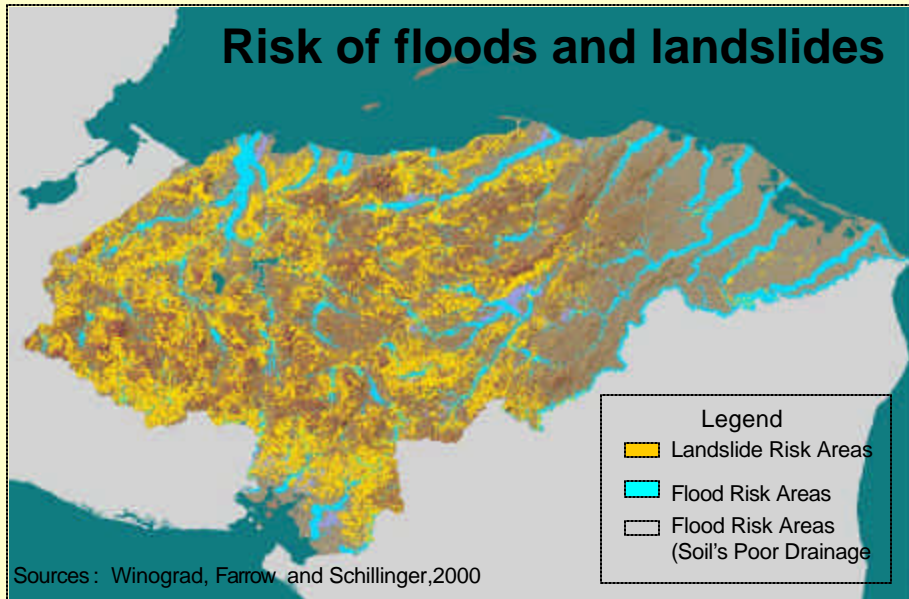


**Accessibility:** Accessibility is critical for the development and livelihoods, as it affects the movement of people, goods and services. Vulnerable infrastructure, and consequently limited accessibility, implies important impacts on economic, health, agriculture and social situation.



**Accessibility after Mitch:** Damages to infrastructure, shows the short and long term effects on accessibility. For example the impact of hurricane Mitch, on the accessibility to populated places or markets (in El Salvador, Honduras and Nicaragua) shows that 80% of road infrastructure and access to markets were affected.

# Forecast the syndrome...

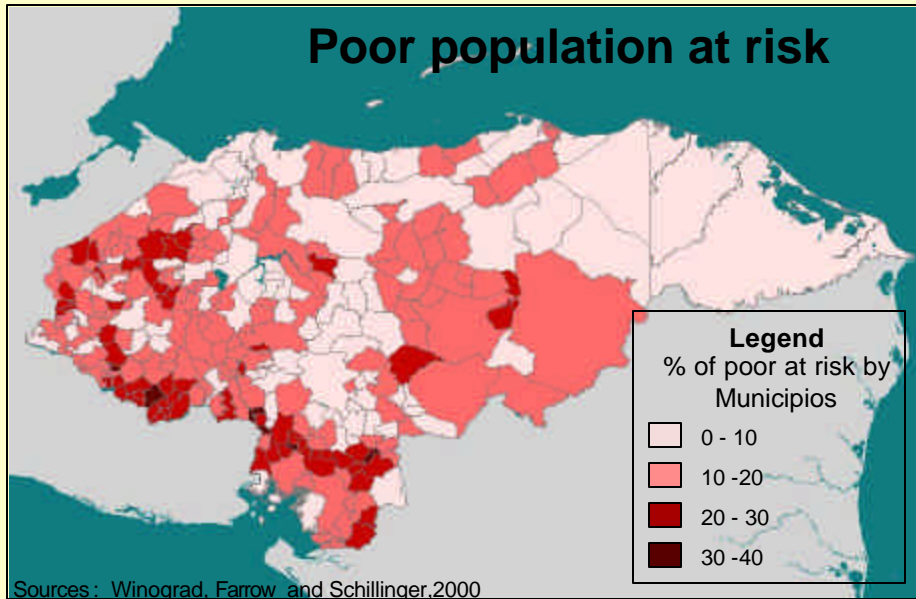


**In Honduras 50% of the land is at risk of landslides and 25% of the land is at risk of flooding.**

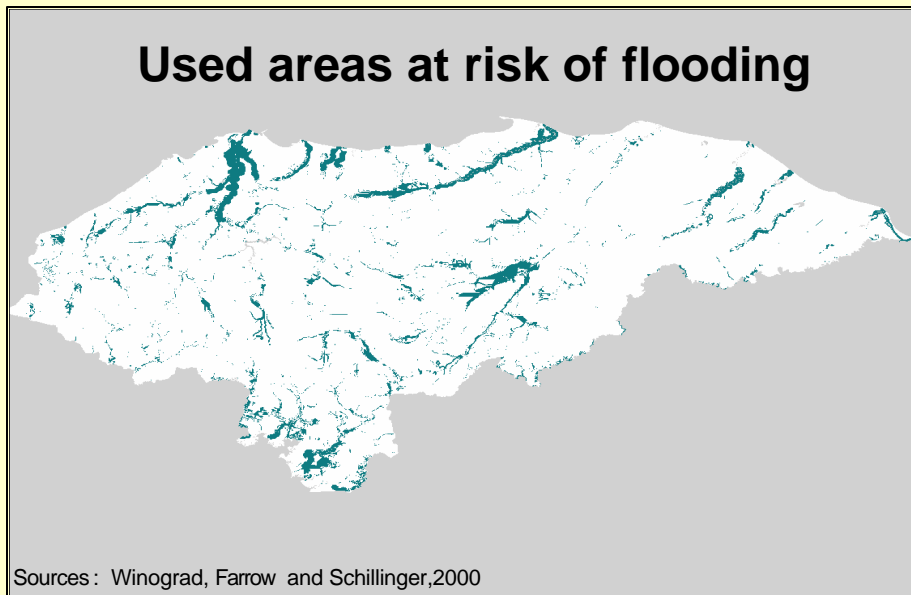


**At national level the risk of infrastructure is one the main factors of vulnerability. In the case of Honduras, for example 50% of the primary roads network is at risk of landslides and/or flooding.**

# Forecast the syndrome...

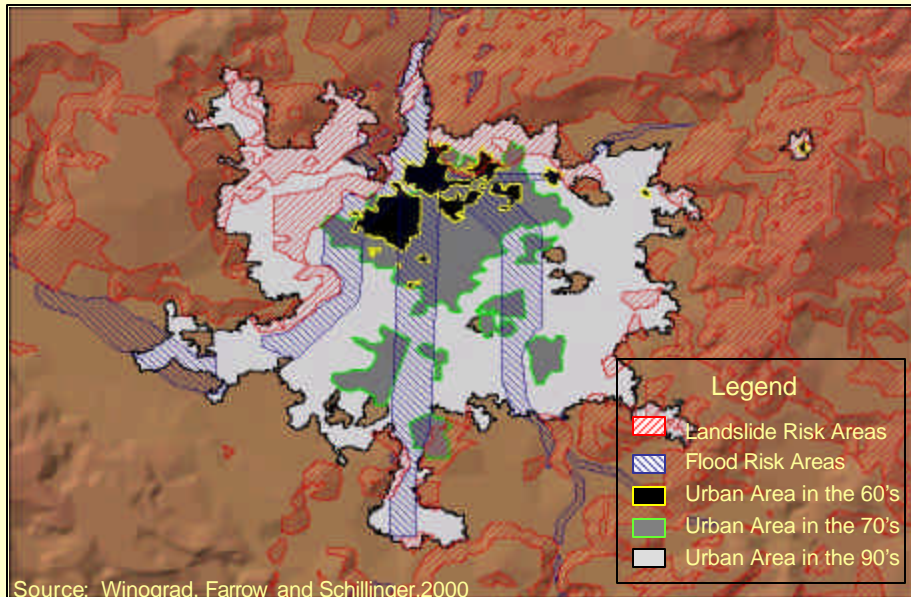


**In Honduras, given the location and lack of options of poor population, a big part is at risk of landslides or flood.**

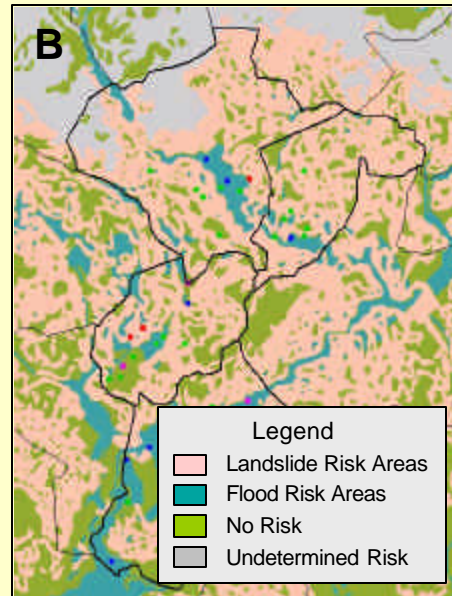
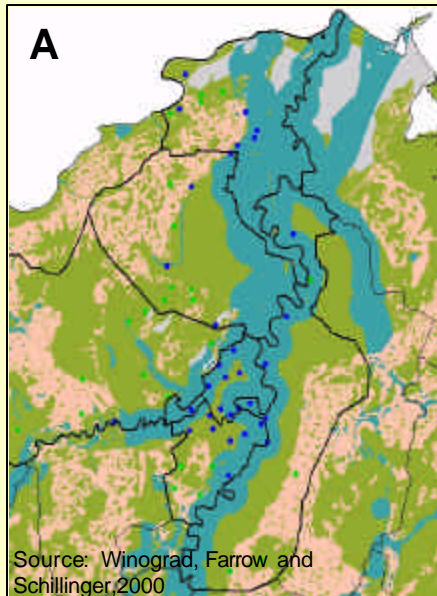


**In Honduras, 60% of used lands (e.g. agriculture, urban, altered) are at risk of landslides and 50% of used lands are at risk of flooding.**

# Forecast the syndrome...



**At local level, the location of population and infrastructure in urban areas is one the main factors of vulnerability. In the case of Tegucigalpa, for example, more than 40% of the actual urban area is at risk of landslides and/or flooding.**



**At the local level, the location of land use and production systems in rural areas are the main factors of vulnerability. In lowlands (A) the most part of agriculture and urban areas are at risk of flooding. In hillsides (B) the most part of agriculture and urban areas are at risk of landslides.**