

Stevens Institute of Technology Summer Project

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07/10/15

Introduction



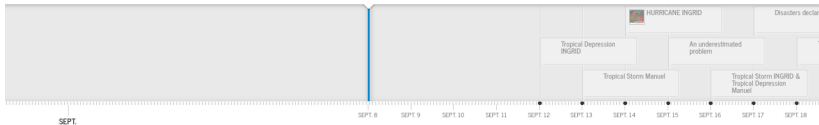
Natural disasters 2013

In September of 2013 two hurricanes category 1 in the Saffir-Simpson scale, affected 19 of the 31 states in Mexico. Even though both tropical storms were not as destructive as other hurricanes (scales 3-4) the interaction between storms (one in the Pacific Ocean and the other at the Atlantic Ocean) was catastrophic.



SEPTEMBER 12,
2013
Tropical Depression
INGRID

WWW.CNN



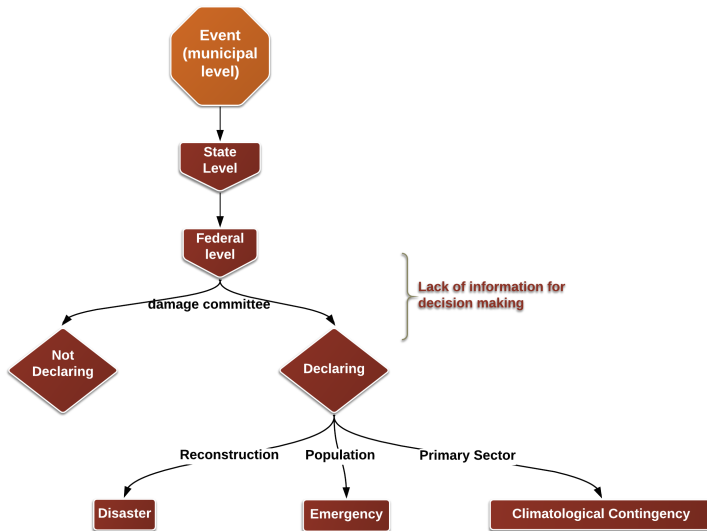
Follow the Disaster Time Line to learn more about the evolution of Ingrid and Manuel tropical storms.

Disaster Risk Management



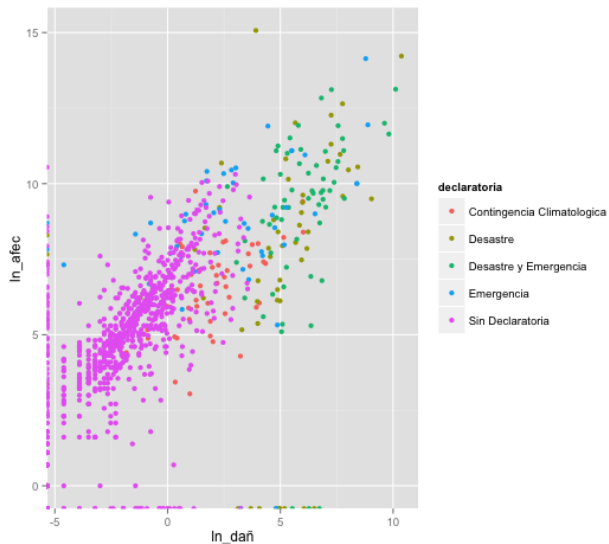
source: CATALYST winter Resilience Academy, 2013

Mexican Disaster Management Process



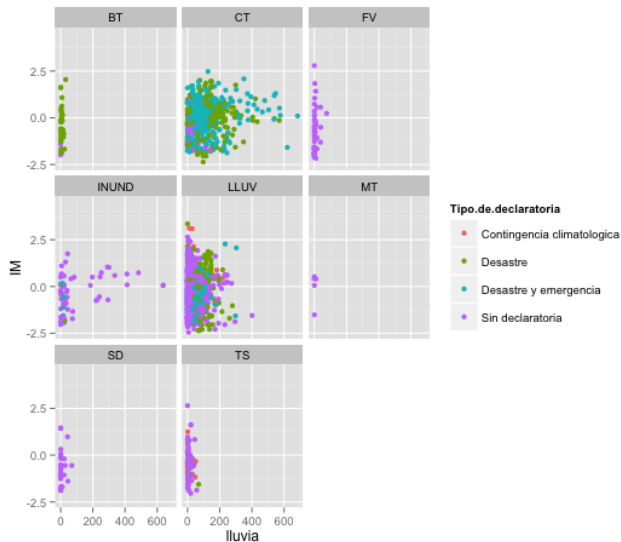
Problem

Lack of information during the disaster Management Proces and no clear rules



No clear rules

Neither at a municipal level, using rainfall as a damages proxy



Objectives

Develop and apply methods to assess the suitability of using news flows and precipitation data to characterize disaster damages in Mexico looking forward to resource allocation improvement(disaster management).

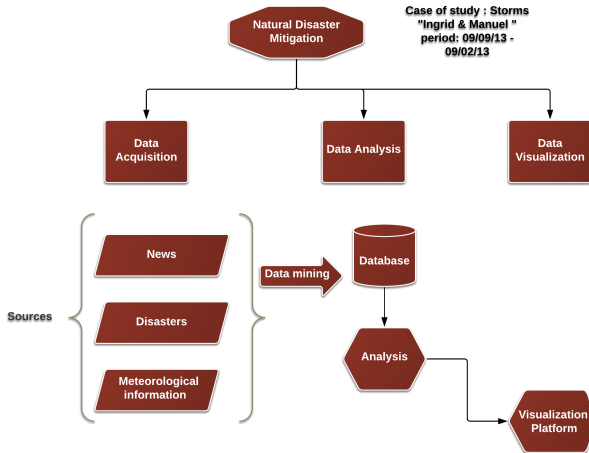
We will work towards explaining the determinants of declaring or not declaring a disaster

Working plan

- ▶ Analyze information flows using Newspaper, TV and radio data.
- ▶ Correlation of news flows with precipitation data.
- ▶ Correlation of news flows with damage metrics (evaluation and public expenditure).
- ▶ Accompanying interactive visualization tools

Workflow

The workflow of the project is the following:

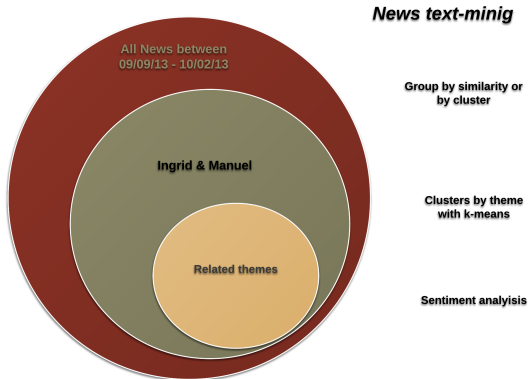


Information Sources

Information Sources for Event Analysis

Meteorological Information	Tropical Storms route	NOOA	<ul style="list-style-type: none">• Day• Location
	Precipitation	SMN	<ul style="list-style-type: none">• Daily precipitation• station
Damage Assessment	Damage Assessment	CENAPRED	<ul style="list-style-type: none">• State• Date• Affected population• Damages
	Public Expenditure	FONDEN	<ul style="list-style-type: none">• State• Public expenditure• Affected sector
	Disaster Relief Assistance	SEGOB	<ul style="list-style-type: none">• Municipality• latitude and long• type of assistance
News	National News	EI	<ul style="list-style-type: none">• Radio• TV• Newspaper• Web

News Porcesing



Project Time-Line

Project Time Line 07/03/13 - 08/16/13

