**Introduction**

Disaster resilience refers to *the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions*[[1]](#footnote-1). Three of the main factors for achieving resilience are: preparedness, reaction time and adaptability. For each of these factors, tools that enable monitoring and event identification are extremely important[[2]](#footnote-2).

The lack of information during and after a disaster is one of the main problems for public policy makers for disaster mitigation and even conflict prevention \footnote{}\footnote{}[[3]](#footnote-3)[[4]](#footnote-4). Knowing how people are moving, sharing information and the range the information flow is vital for generating proper solutions, especially under emergency situations\footnote{}[[5]](#footnote-5).

Efforts have been done to direct user-generated content on social media to identify damaged zones in disasters \footnote{}[[6]](#footnote-6). These efforts have focused on mapping crisis in areas of limited statehood or limited resources in which local disaster mitigation agencies have limited resources.

This work will analyze population mobility and its correlation with damage and loss metrics using microblogging and news data. The main objective is to work towards an open and real time visualization platform for coordinating disaster mitigation decision making. For this purposes we will analyze a case of study for Mexico during September of 2013.

In September of 2013 two hurricanes category 1 in the Saffir-Simpson scale, affected 19 of the 31 states in Mexico. Hurricane “Ingrid” \footnote{}[[7]](#footnote-7) took place during 12-17 and hurricane “Manuel” \footnote{}[[8]](#footnote-8) 13-20 of September[[9]](#footnote-9). Even though both tropical storms where not as destructive as other hurricanes (scales 3 -5) the interaction between the two storms (one in the Pacific Ocean and the other at the Atlantic Ocean) was catastrophic. Added to the fact that a lot of people went out for short vacations during 13-17 of September and the government was preparing for the independence holiday celebrations. Given the unpredictability and quickness in which disasters affect communities, a real time open visualization platform could help in these situations.

**Data**

The period of study is September 9th (3 days before hurricane Ingrid started) till October 4th (15 days after hurricane Manuel finished). The following section describes the data needed for this project:

* News data: The Company “Eficiencia Informativa” gathers information from electronic, newspaper, radio and TV news. The idea is to scrap all the news related to Ingrid and Manuel during the period of study.
  + Status: already have the access to the company´s system
* Micro blog: Use Twitter information to measure mobility during Ingrid and Manuel
  + Status: Have to ask for it
* Disaster Database: The National Center for Natural Disaster Prevention (CENAPRED) has the damage evaluation for the affected states.
  + Status: already have the data
* Meteorological Information: The precipitation data could help us as a proxy for damage metrics. The data could be obtained by NASA precipitation grid or by the National Meteorological System.
  + Status : Have to ask for it

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