

Outline for a Master Thesis in the Risk Management Research Group

Topic: Media reports as a data source for disaster analysis

Context:

In the USA, there are seen many natural catastrophes as hurricanes and floods. Often so called Critical Infrastructure are affected, which may lead to cascading effects due to the high connectivity of today's world. Hence, it is important more than ever to have a fast recovery in order to prevent such effects and thus to strengthen the resilience of an affected area.

Nowadays, apart from print media, there are many information shared via social media. Since not only private persons use it, but even companies provide information in these portals, there is a large dataset available and it is seen a high potential to use these data in the context of crisis management.

The following aspects should be included in the thesis:

- (1) A structured overview of existing media information (i.e. print media and social media) for the biggest disasters that occurred in New York during the years 2010 till 2012 should be provided in order to achieve a better understanding which Critical Infrastructure was affected at which time. A special focus should be on energy supply and transportation. It should be put a strong focus on the methodological procedure for identifying ("filter") the relevant information out of official and social media data(bases) together with a systematic approach to evaluate the information ("assessment") with respect to explanatory clues, source credibility, sender intention etc.
- (2) The disasters found by (1) should be compared along each other and classified by different categories to analyse the gained data in the context of crisis management. Can there be seen the same structured failures in many natural disasters such that it is possible to identify risky components?

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