

# Open Data and Disaster Management

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GEO-C



## Hurricane Katrina (2005)



**1,245–1,836** – Fatalities

Damage **\$108 billion** (2005 USD)

## Haiti Earthquake (2010)



**220,000-316,000** - estimates of the death toll vary

**300,000** - number of injured

**1.5 million** - people initially displaced

# Open Data

*“Open data is data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike”.* Data to be open must be open *legally* and *technically*.

# Before and After Satellite Images in Haiti



- Google
- DigitalGlobe
- GeoEye

# OpenStreetMap Before and After Haiti Earthquake



# Ushahidi

## Dead Body Management: Delmas 33

VERIFIED  
**NO**

### LOCATION

Delmas 33 & St Patrick St, Port-au-Prince, Haiti

### DATE

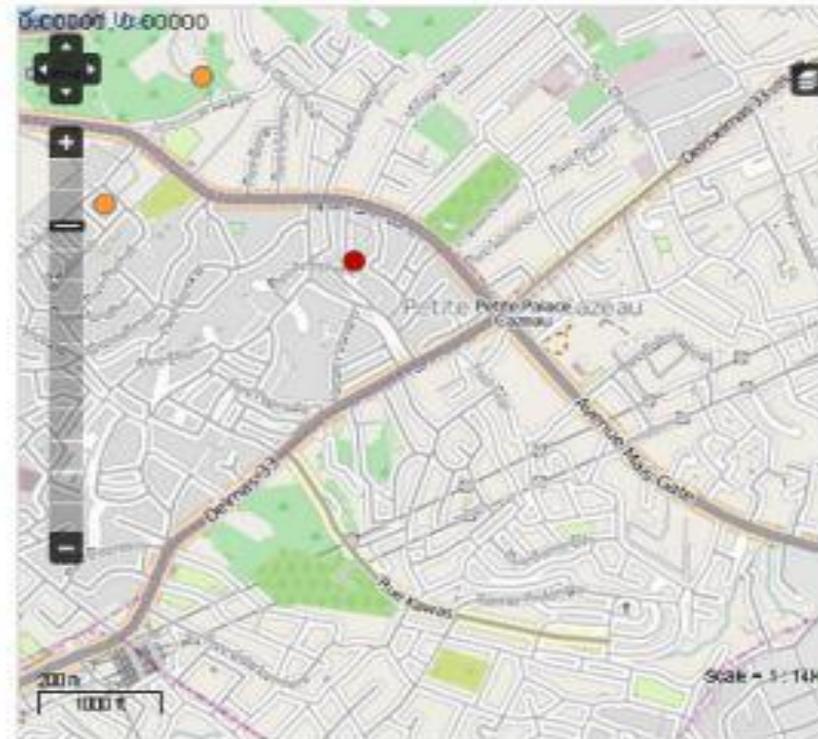
Feb 3 2010

### TIME

13:39

### CATEGORY

[AH\\_MORGUE | DEAD BODIES MANAGEMENT](#) [6A\\_DECES | DEATHS](#)



## Incident Report Description

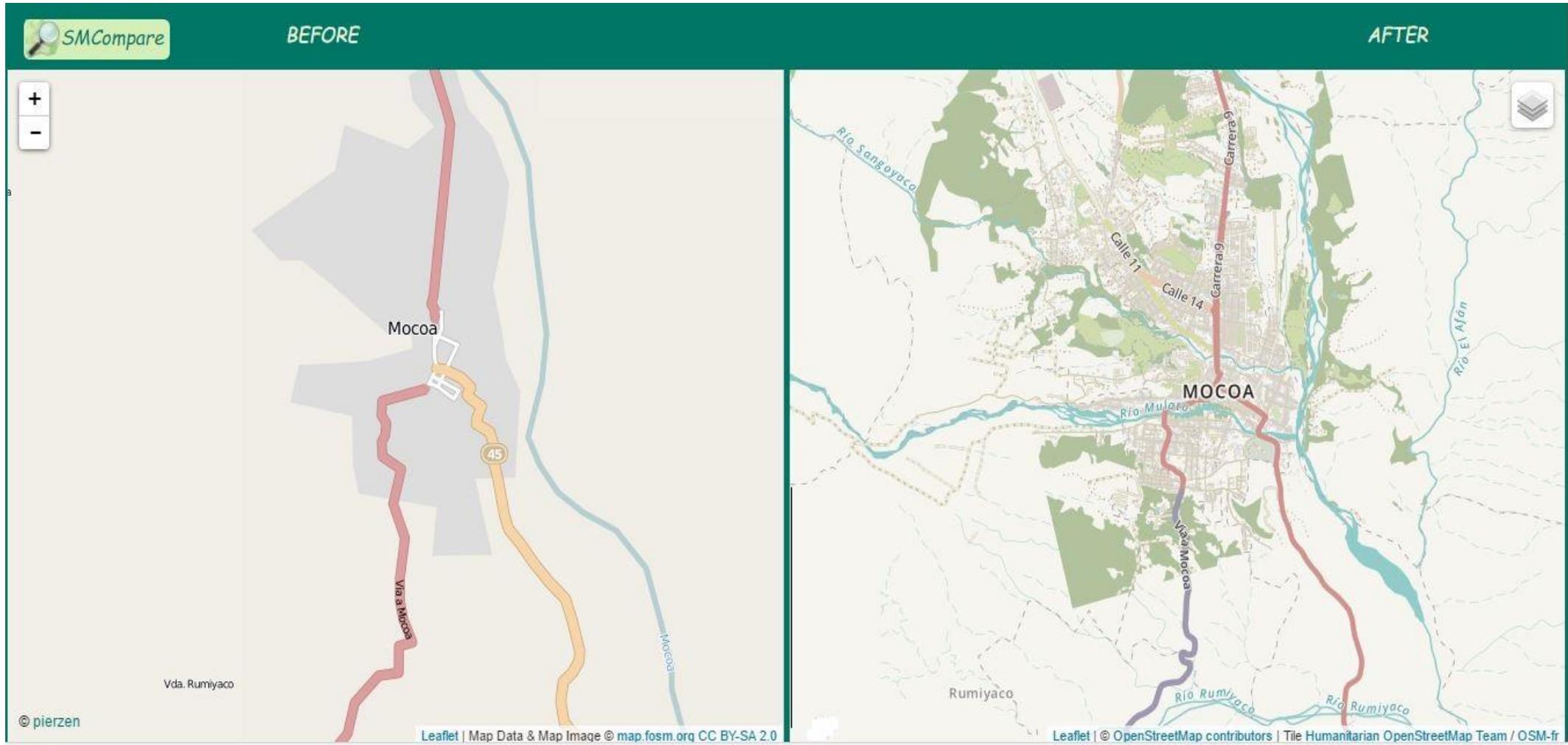
english:

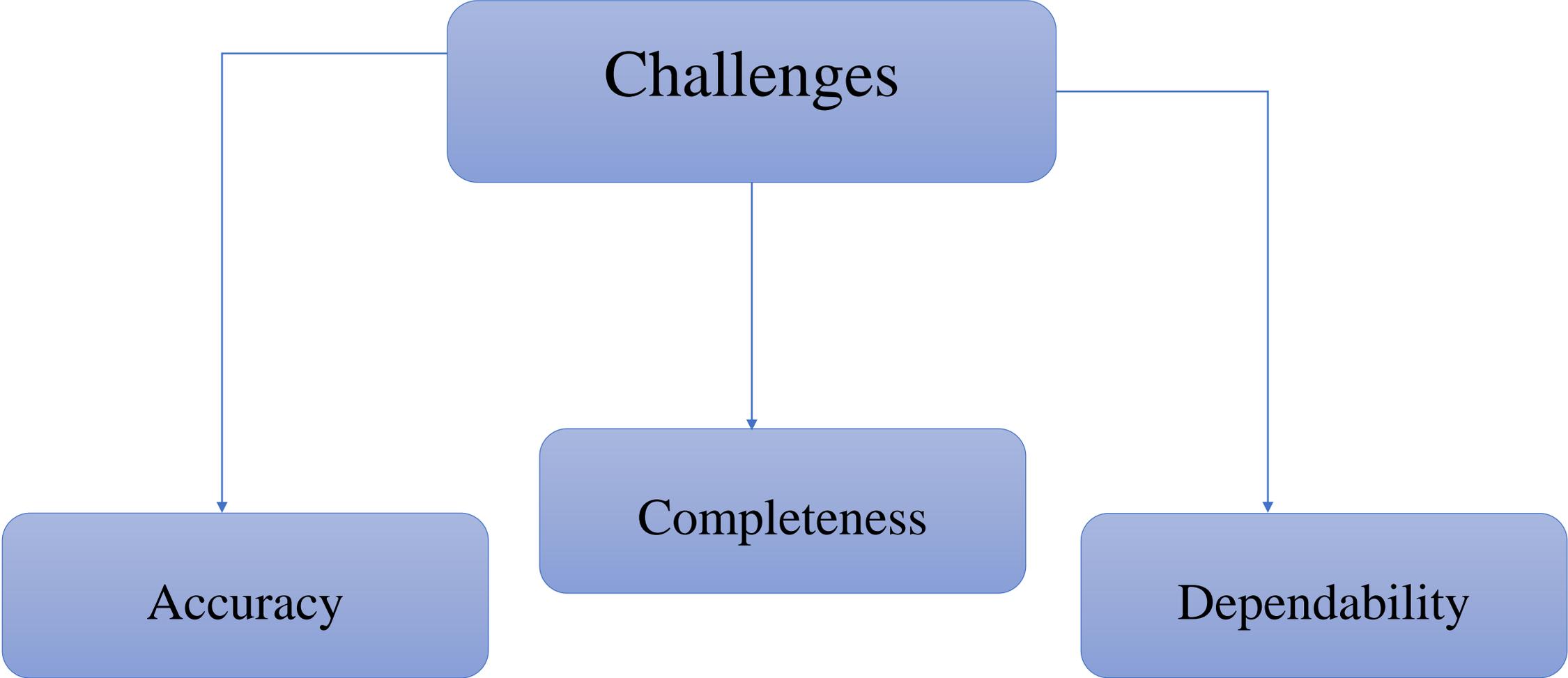
Good evening, I have a dead child under the rubble of my house in Delmas 33, St-Patrick Street, No 10. -- Category: --6a. Deces | Deaths

creole:

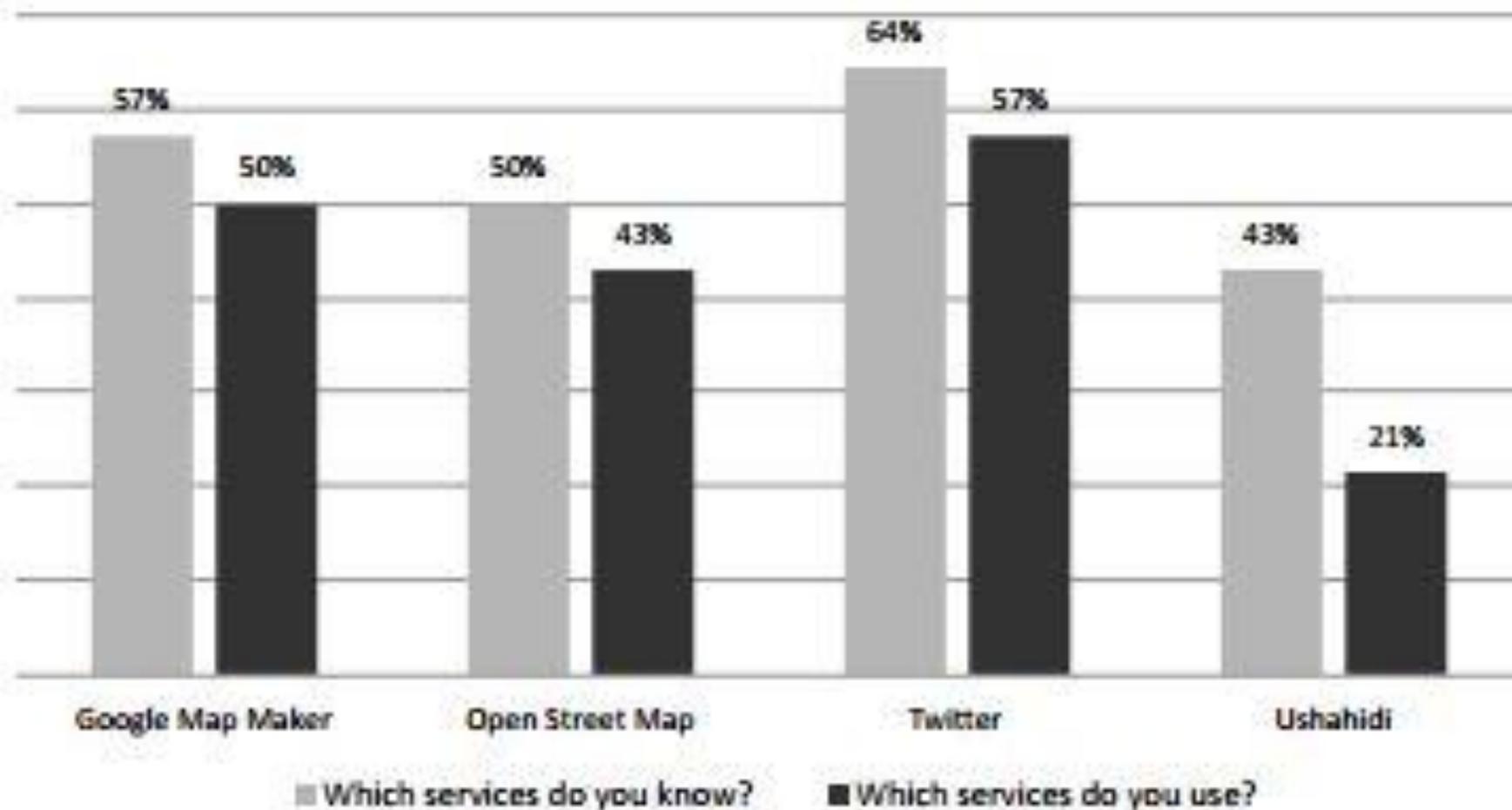
bonswa m=gen yon timoun ki mouri anba kay mwen delma 33 ru st patrik no 10

# 2017 Mocoa (Colombia)





## Knowing vs. Using Services



# Karnataka State Natural Disaster Monitoring Centre

(KSNDMC)

6,000 Telemetric Rain Gauges (TRGs)

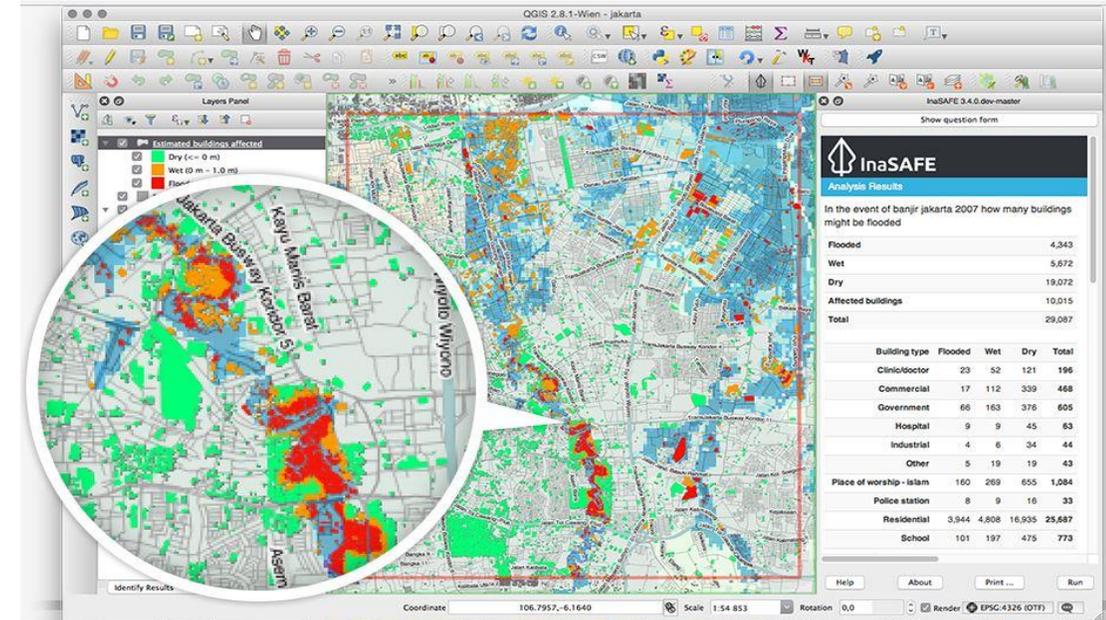
750 Telemetric Weather Stations (TWSs)

- Arc SDE Spatial Database
- ArcGIS Desktop
- ArcGIS Server
- Web GIS Technology



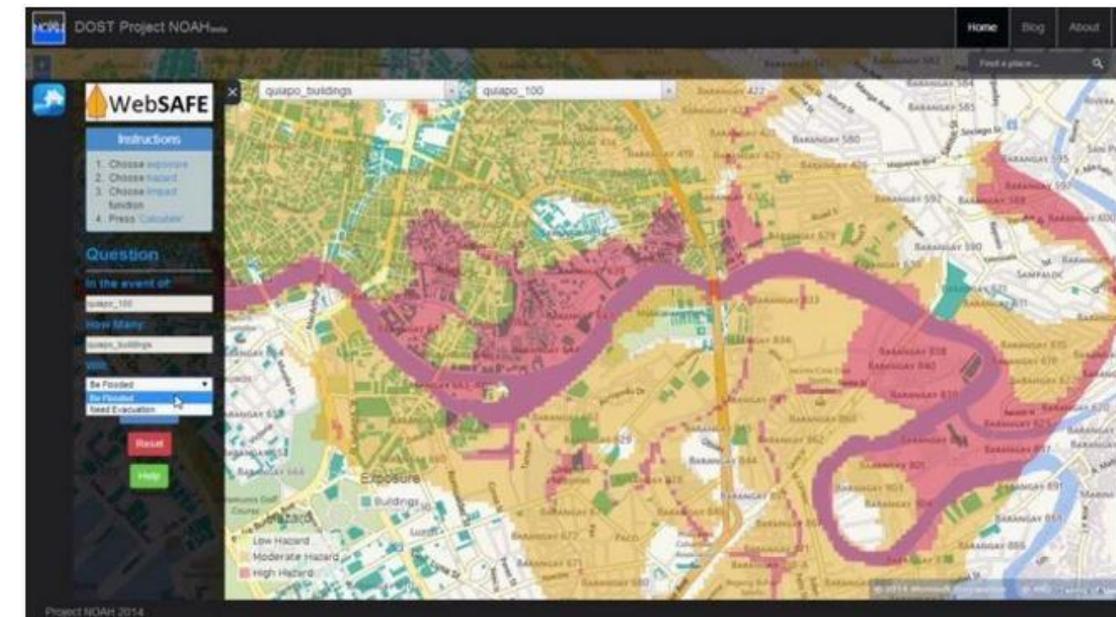
# InaSAFE

Indonesia's software, which produces realistic natural hazard impact scenarios. It integrates data from scientists, local governments and communities. It is only used by officials in Indonesian National Board for Disaster Management (BNPB).



# WebSafe

Launched by The Philippines' Project NOAH (Nationwide Operational Assessment of Hazards). WebSAFE is incorporated in Project NOAH website which allows everyone to the information.



# Conclusion

- Open Data is valuable tool for disaster management. It can help to make quick and effective decision. When data is not fully available VGI and existing Open Data can save lives, resources and mitigate losses.
- Early-warning systems can save and protect huge numbers of lives. 2013 during Cyclone Phailin new early-warning system and a network of cyclone shelters kept 900,000 people. In 1999 during the same size storm were died 10,000 people.

Therapeutic  
Journal