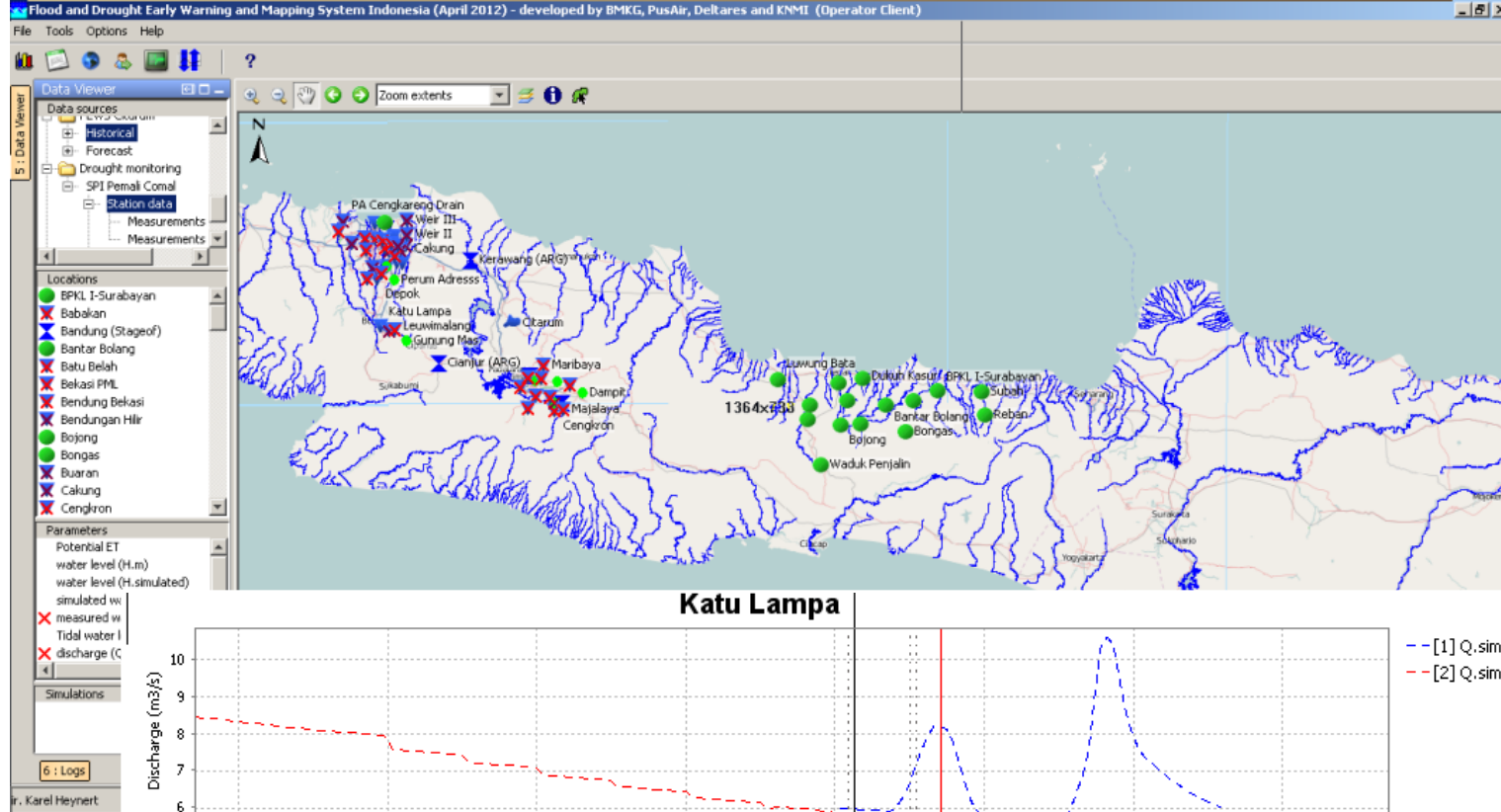


Twitter Analysis for Quick Flood Response



Jurjen Wagemaker - www.floodtags.com

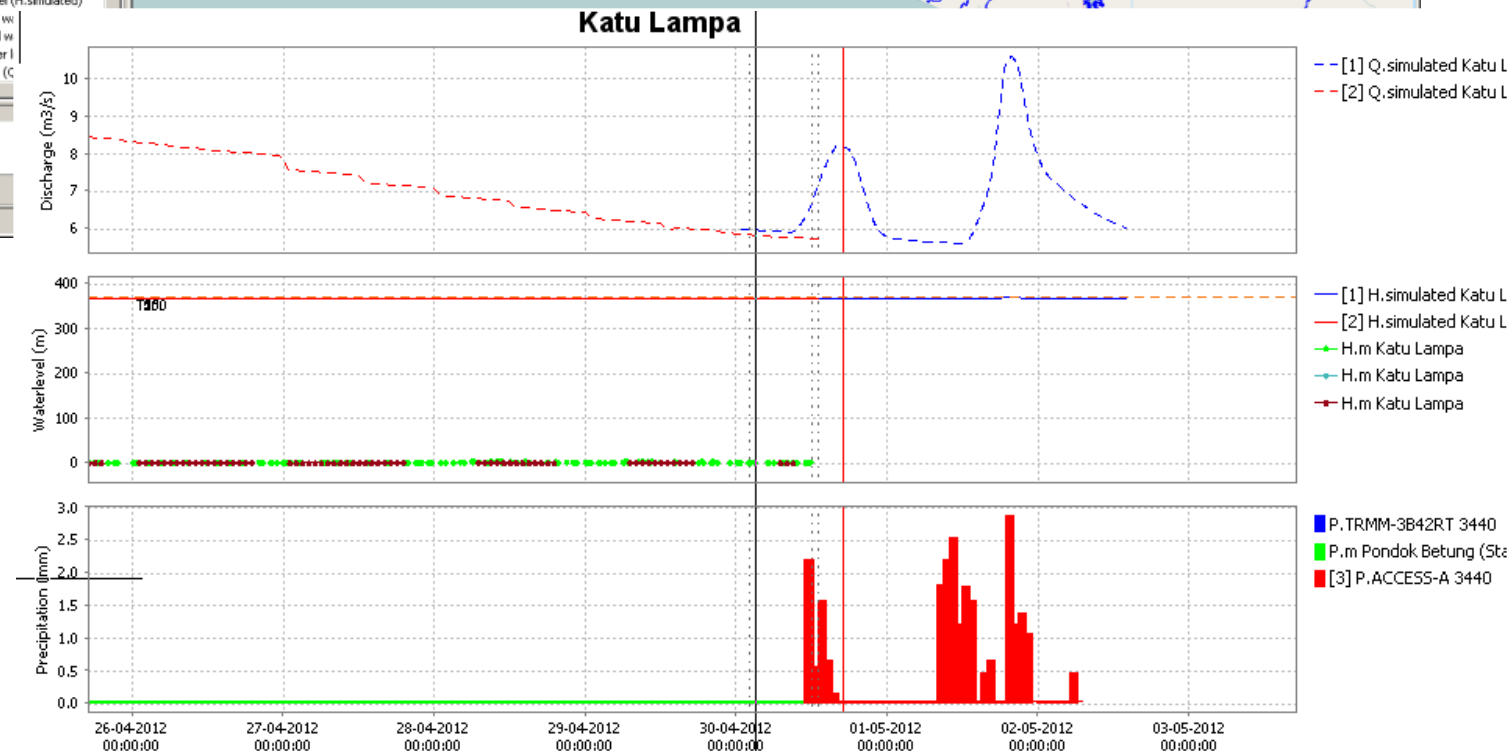




JAKARTA 2013

"Didn't you build a flood information system?"

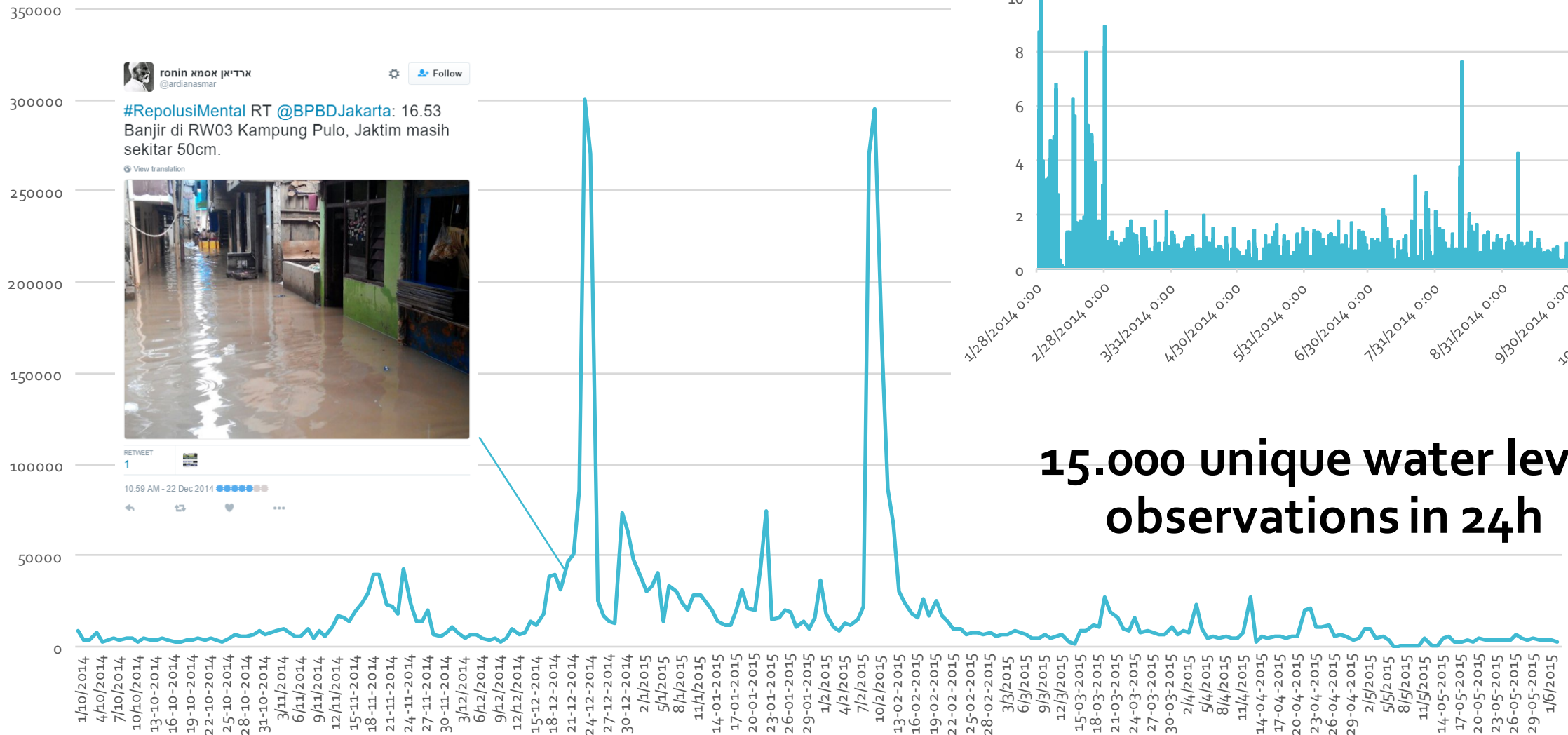
"So.... where are the floods?"



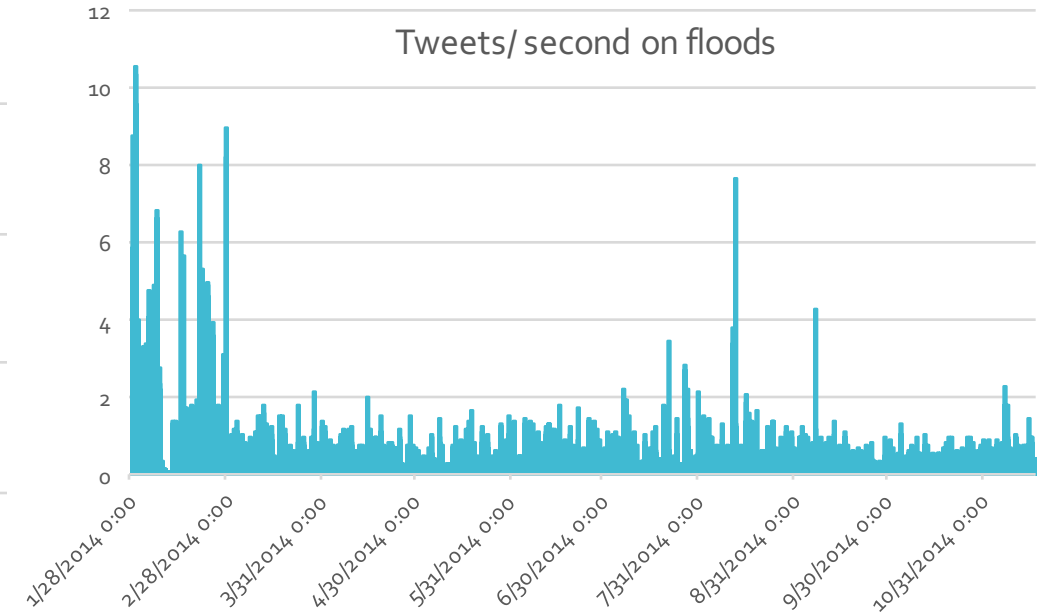
[1] 30-04-2012 02:00:00 Current Run_SOBKEK_Forecast_ACCESSA [2] 30-04-2012 13:00:00 Current Run_SOBKEK_historical_AWS [3] 30-04-2012 12:00:00 External

Tweet peaks during big floods

Daily totals Indonesia "banjir"



Tweets/ second on floods



15.000 unique water level observations in 24h

Platform

that helps organisations worldwide
work with user generated content
in their water and development projects

Collect



Twitter, Instagram,
Blogs, News Articles,
Radio, SMS etc.

Analyse



Relevance, Reliability,
Analysis. Joint
development of scripts
supported by SDK

Share



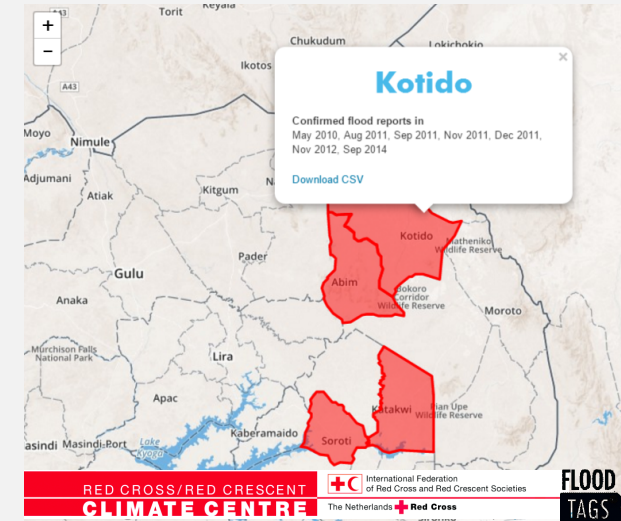
Data via API and
Dashboard. Users help
improve filters and
geocoding.

Global Flood Monitor on basis of Twitter

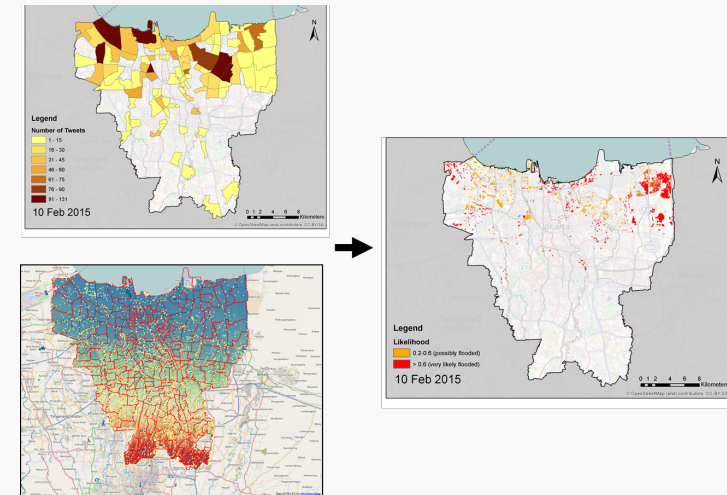


High precision filter for the most reliable global tweets
Support choice of satellite imagery to process

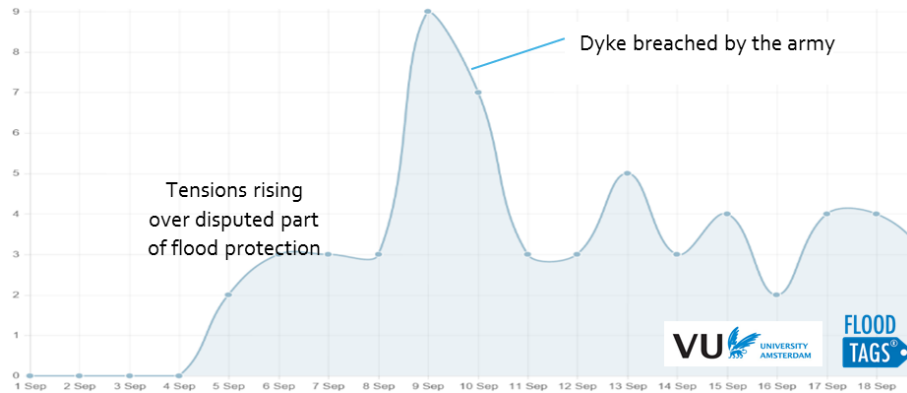
Historic floodmap on basis of news articles



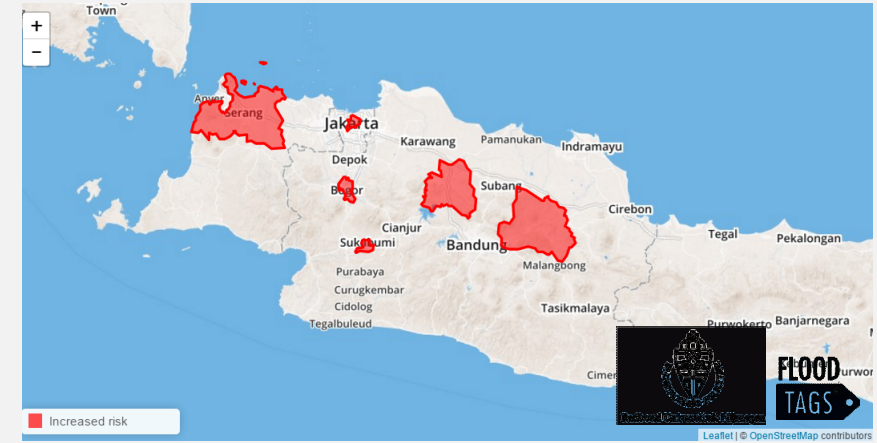
Realtime Flood Maps on basis water level observations with DEM



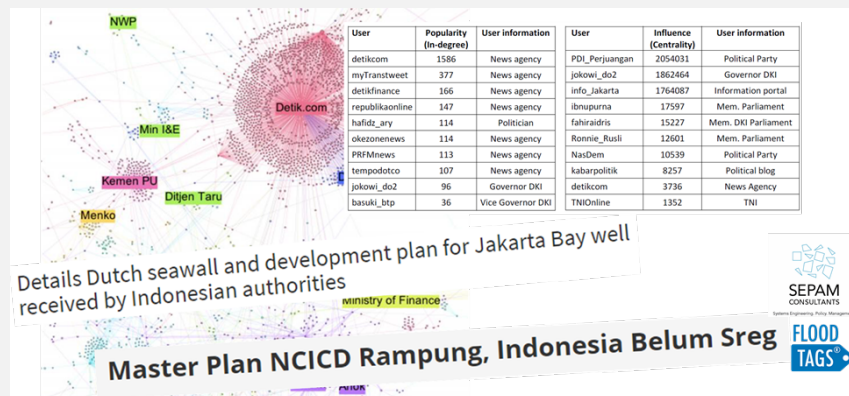
Culminating water conflicts



Water-related diseases risk

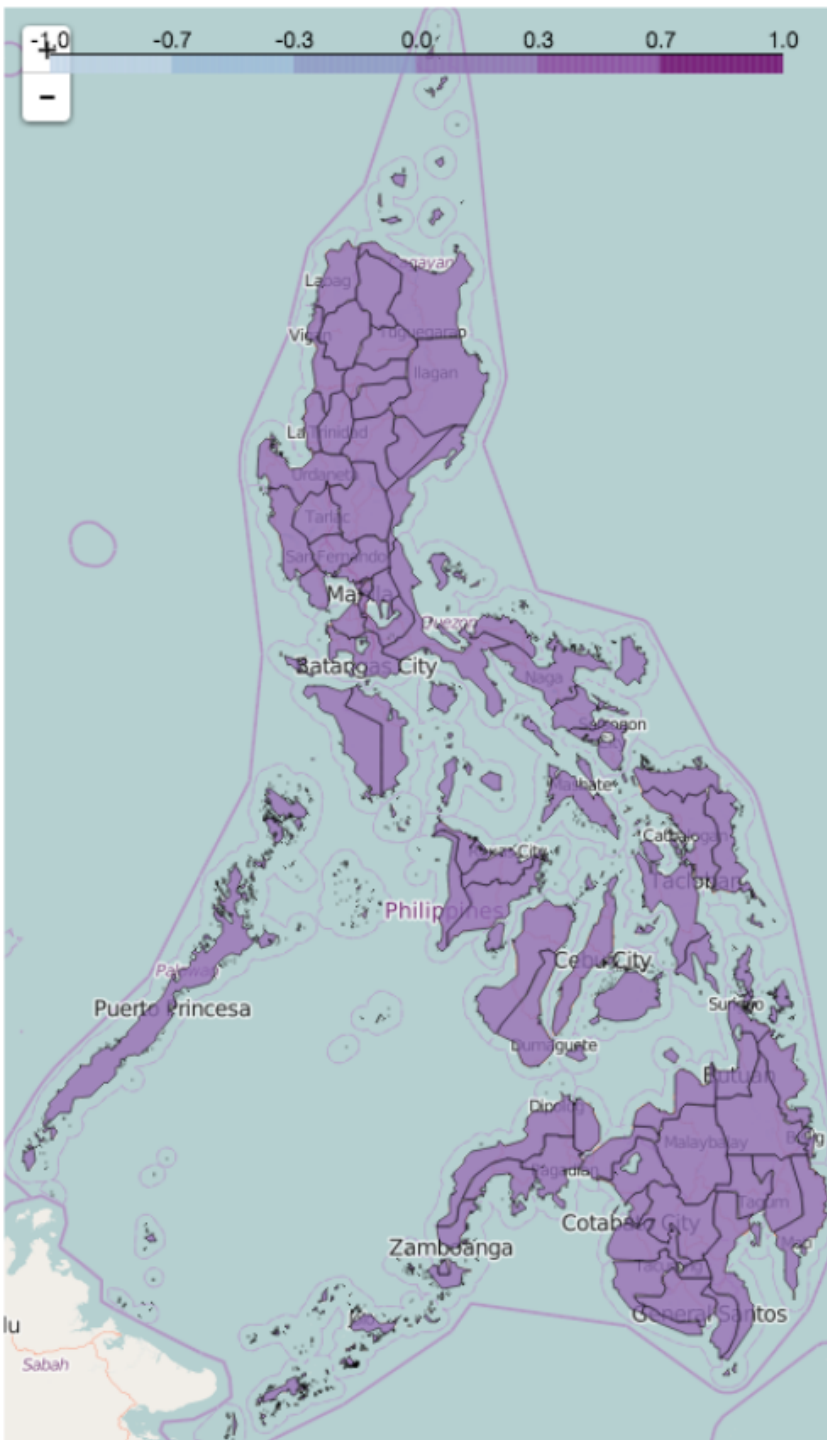


Public response to water development projects



Floods preceded by worries over dam operations upstream





Philippines floodprone.
2014 alone had 21 floods in 80 regions.

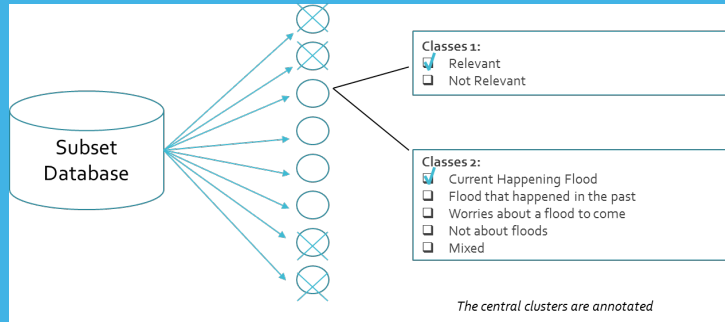
People share up to 85 thousand tweets on large events. Also smaller & rural events are covered.

For the Philippines Red Cross we will extract the relevant and reliable content and use it to help flood extent and impact mapping.

The results will be easy to connect to by other organisations in or outside of the Philippines

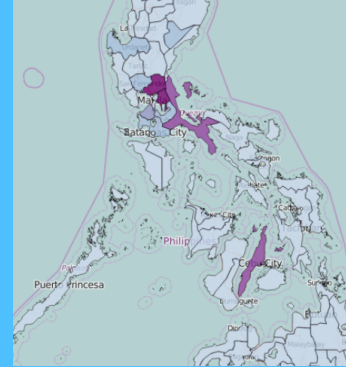
Look for Relevance

Clustering - Annotation - Classification



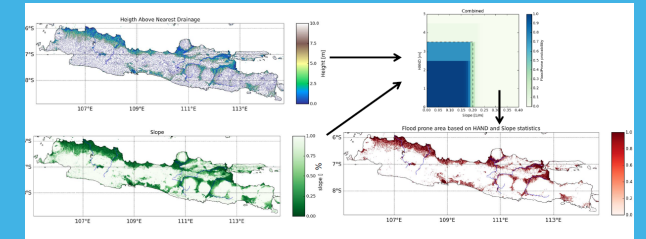
GeoCode

POS tagging and Geodatabase



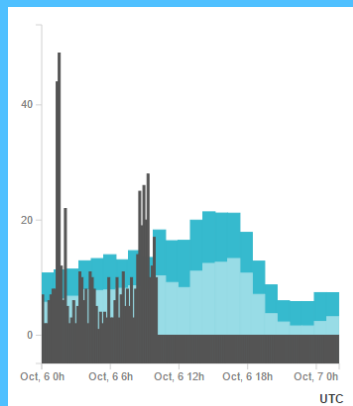
Look for Reliability

DEM, GSMap NRT and MODISLance



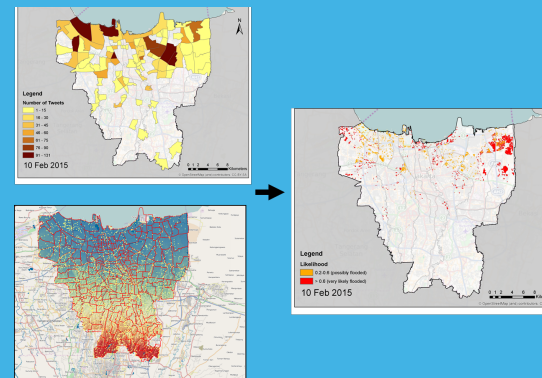
Set thresholds

Fitting, #SD tweet statistics



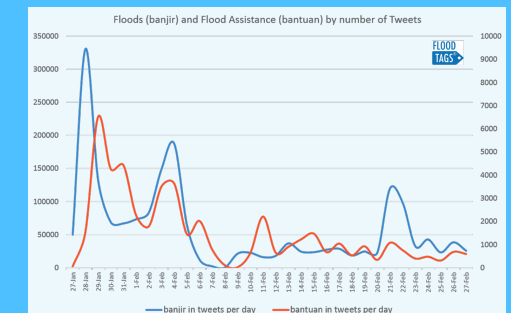
Define Flood Extent

Combination of DEM, Aqueduct



Impact Overview

Classifiers, topical overviews, matching with key infrastructure



since (dd-mm-yyyy)

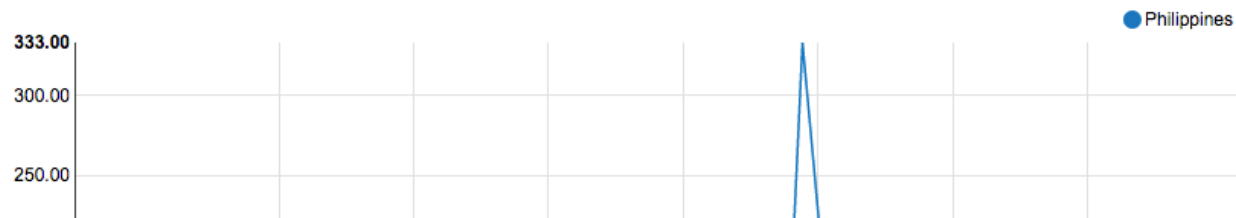
until (dd-mm-yyyy)

time period

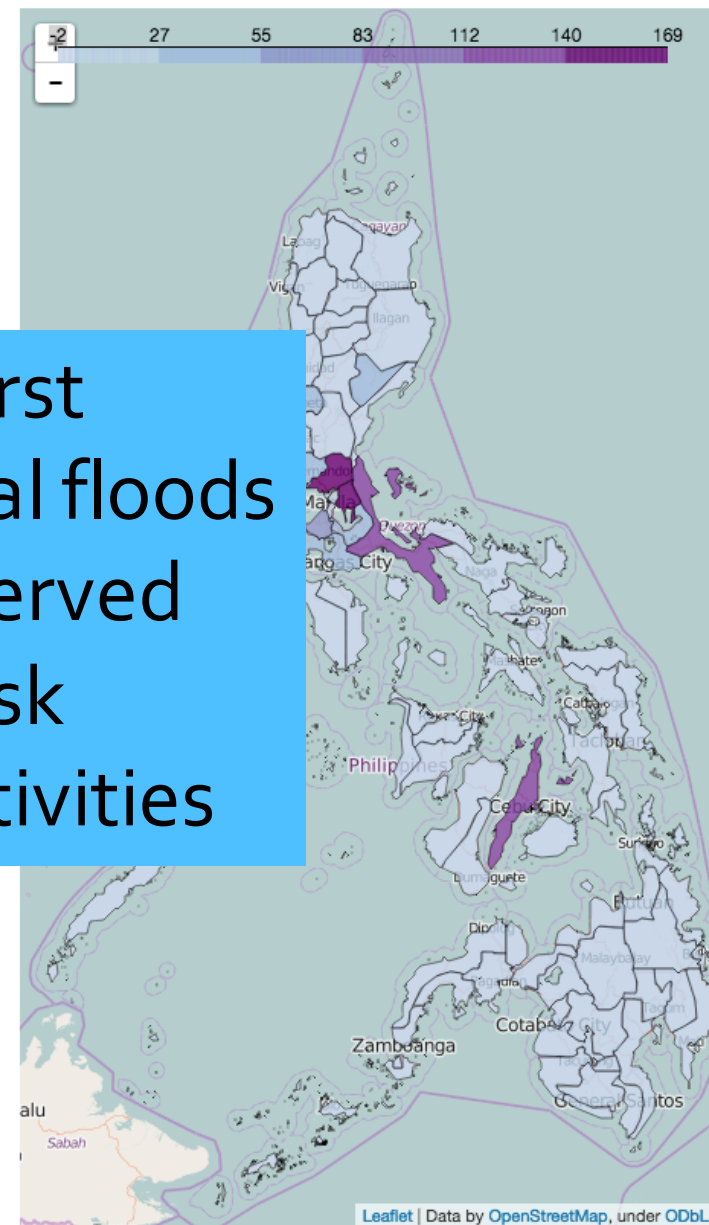
term

Search

Select Region



Filtered Tweets. Highest Priority First
 Flood Alert, also for many smaller or rural floods
 Topical Overview of what's being observed
 Potential flood extent or area at risk
 Indication of damage and response activities



ket
 @Keithferaren

Follow

Oy grabe naman sa DCNHS. Ang taas ng baha sa loob
 1:24 AM - 23 Sep 2014

Retweet Like

ket
 @Keithferaren

Follow

Maygad baha pa rin
 1:23 AM - 23 Sep 2014

Retweet Like

FloodTags - Temporary developer environment

Global Flood Monitor, Precise Query

Philippine Flood Monitor, Recall Query

Access to the API

Access to the SDK (Software Development Kit)

Register via
www.floodtags.com

FloodTags API - v1

- Individual tags
- Multiple tags
- Tag statistics
- Graph data
- Relevant words
- Location data
- Labels
- Share
- Classify

Method: GET

Select filter source

philippines ▾

skip

tag

limit

tag

until

Downloaded from <http://ajph.org/> on November 10, 2015

since

Downloaded from <http://ajphaphysiol.org/> on September 11, 2012

hasWaterdepth

hasPhotos

text

author

@

properties

labels

classes

Oy grabe naman sa DCNHS. Ang taas ng baha sa loob
1:24 AM - 23 Sep 2014

Maygad baha pa rin
1:23 AM - 23 Sep 2014


```

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        ],
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Thank You

