

Data collection via social media

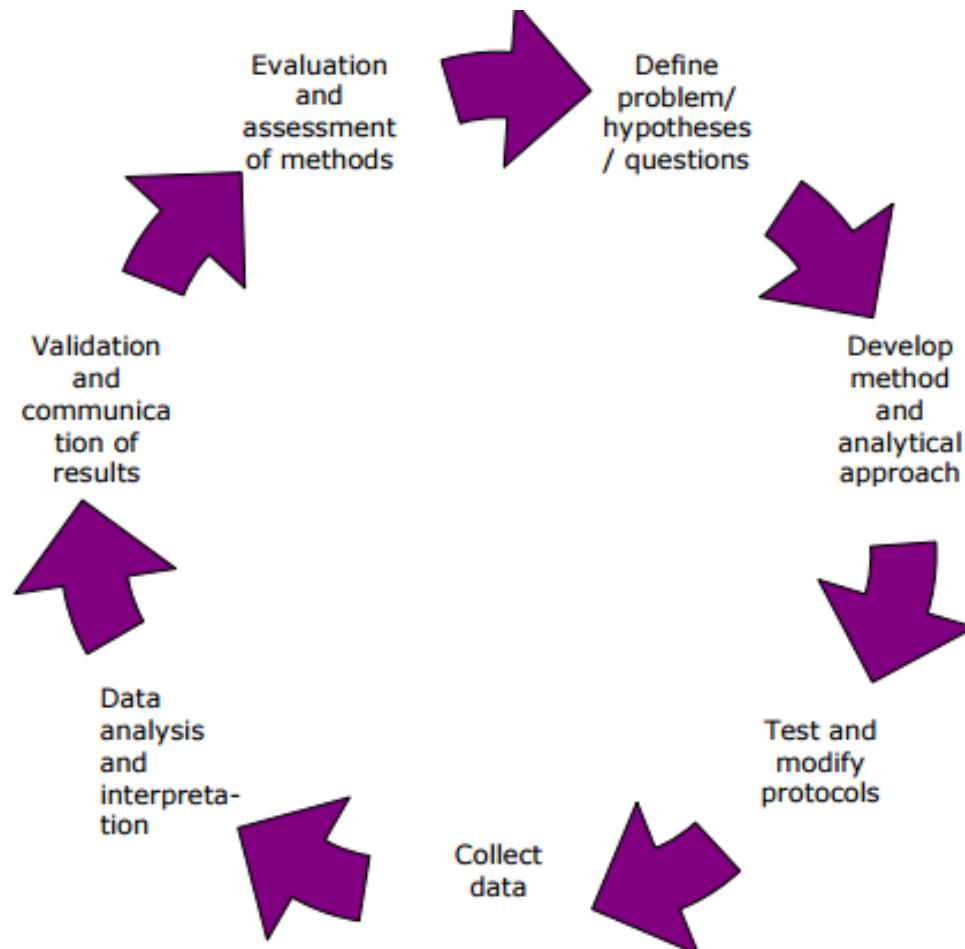
Giulia Annovi – SISSA 20 March 2017

The citizen science evolution

“the involvement of volunteers in science”

“scientist-led mass participation initiatives that are open to all sectors of society”

The citizen science evolution



The citizen science and MASS



Recruitment of volunteers

Retention of volunteers

Training, support and signposting

Data input and analysis

Give personal feedback

Results dissemination

Global Positioning System (GPS), high resolution cameras, and continuous internet connection

Data input and analysis

Twitter: starting from text

How can I get text and other information from Twitter? <https://tags.hawksey.info/>
<https://apps.twitter.com/>

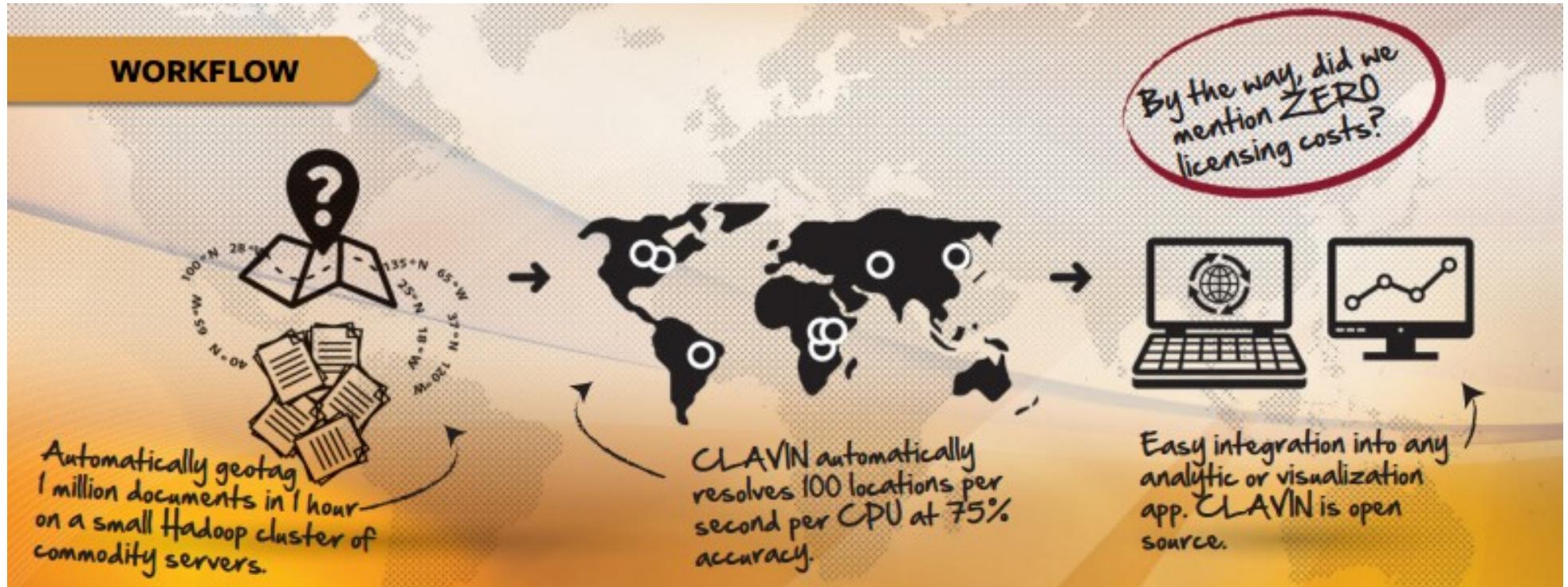


Need a Twitter Archiving Google Sheet?

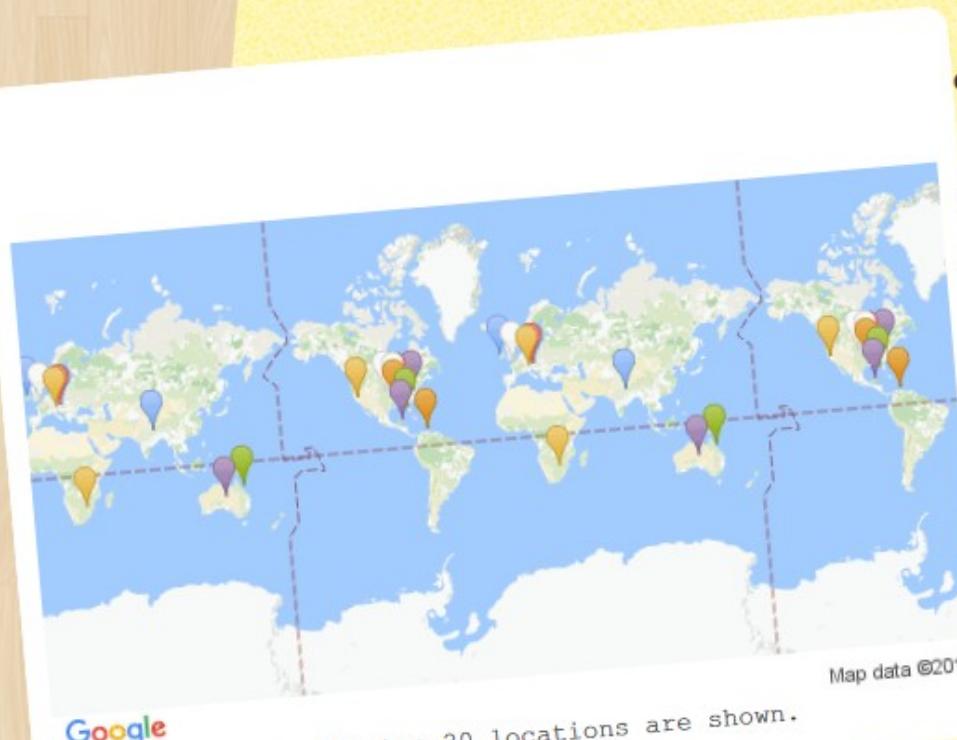
[https://docs.google.com/spreadsheets/d/1_bHuwBdPp4Dzk5CBtBMuYQUyxjJASW5AabnuV_yxnkY/edit?
usp=sharing](https://docs.google.com/spreadsheets/d/1_bHuwBdPp4Dzk5CBtBMuYQUyxjJASW5AabnuV_yxnkY/edit?usp=sharing)

Data input and analysis

Twitter: starting from text



Data input and analysis



Locations Extracted and Resolved From Text

| Location | Lat, Lon | Country Code | # |
|-------------------------------|----------------------|--------------|---|
| United States | 39.76, -98.5 | US | |
| Coral Reefs | -17.61667, 148.51667 | AU | |
| Grand | 38.98955, -76.85331 | US | |
| Mon Pass | 37.19661, -118.9465 | US | |
| 53, -8 | | IE | |
| | 34.54426, -91.96903 | US | |
| Inner Bezirk Neunkirchen | 47.69424, 15.93783 | AT | |
| 3019329 Eu | 50.04606, 1.42079 | FR | |
| 4155751 Florida | 28.75054, -82.5001 | US | |
| 3530103 San Miguel de Cozumel | 20.501, -86.94598 | MX | |
| 2782113 Republic of Anguilla | | | |

Data input and analysis

Twitter: starting from text and images

Download images from Facebook and Twitter
and then obtain the EXIF data



| | |
|------------------------|------------------------------|
| Resolution : | 2273 x 1993 |
| Flash used : | No |
| Focal length : | 3.8mm (35mm equivalent 27mm) |
| Exposure time : | 0.030 s (1/33) |
| Aperture : | f/2.0 |
| ISO equiv. : | 190 |
| Whitebalance : | Auto |
| Light Source : | Daylight |
| Metering Mode : | average |
| Exposure : | program (auto) |
| GPS Latitude : | N 45° 39' 7.755839" |
| GPS Longitude : | E 13° 46' 49.623240" |

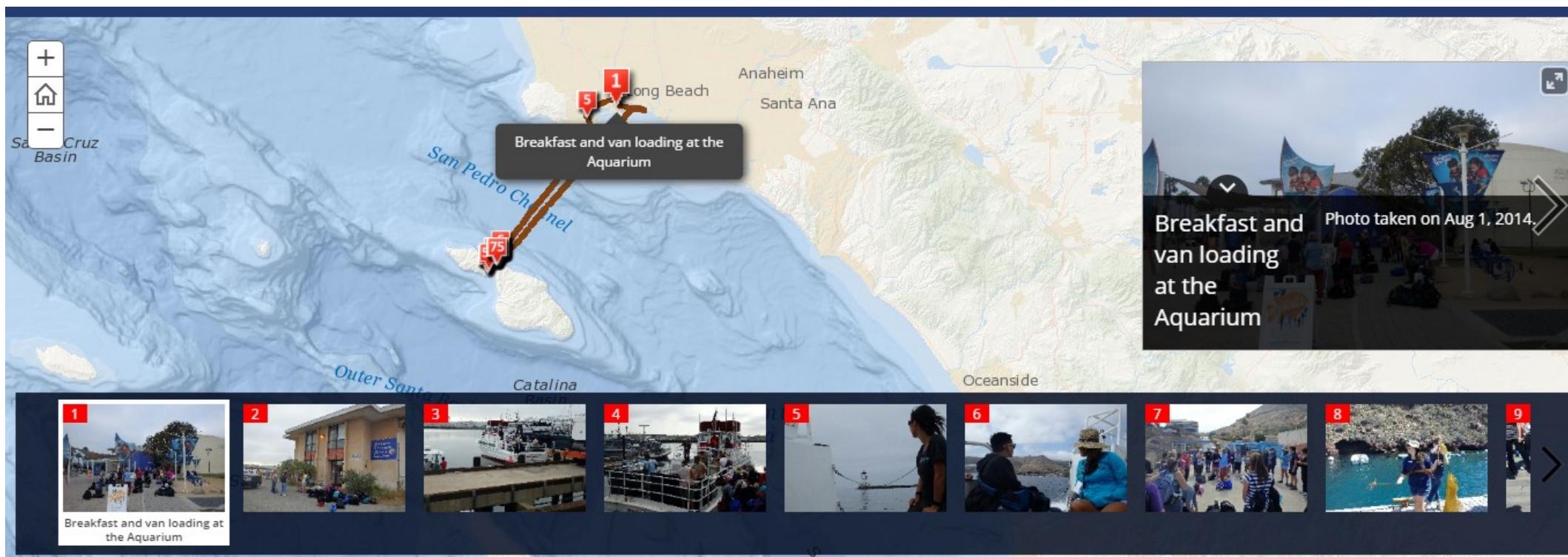
<http://www.verexif.com>

<https://www.tineye.com/>

<http://www.geoimgr.com/en/too>

Data input and analysis

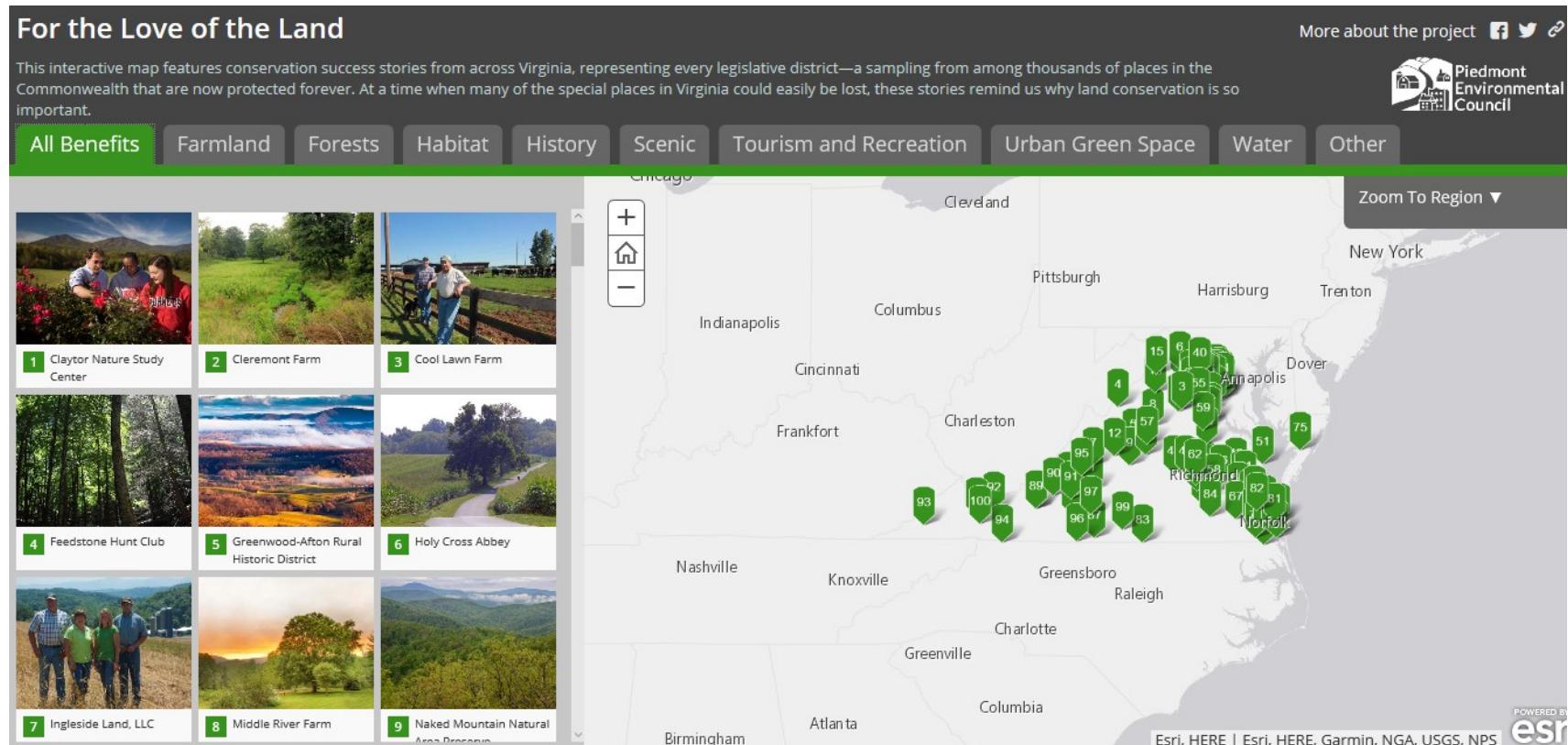
Snap2Mapp - ESRI



<https://marketplace.arcgis.com/listing.html?id=54b4a00a132b4583bd24c37d1c947e1e>

Data input and analysis

StoryMap ArcGIS ESRI



Some threats

VERIFICATION

Social media may increase the number of volunteers recruited, but, depending on the skills of the volunteers and the data collection training provided, there may be no guarantee of data quality

Did They Just See the Aurora?



Tumbleweed
@Robert1288
3/20/17 at 4:08 am
Socialist Republic of Vietnam, 00

@SteelersCrash @MaryHPiper @MacCocktail Aurora was a tough town 1965 66 67.
Vietnam. Lowry. Buckley. Fitzsimmons Hospital. War. us



Yes No ?



Kiosk Creative
@Kiosk_is_open
3/20/17 at 4:06 am
North Fremantle, 08

Brand book for Aurora Project Group. #aurorapg #kioskcreative #northfremantle
@ North Fremantle,... <https://t.co/436mpEibO1>



Yes No ?

ACCESSIBILITY

A large part of population is disconnected from the outdoors

Misunderstanding and misinterpretation of maps

<http://aurorasaurus.org/verify-tweets>

Social media are an opportunity?

Identify at least three major side effects of information sharing on social media

Do social media influence our behaviors? Identify a behavior that is due to the usage of, say, Twitter

Thank you