Standardizing Citizen Science

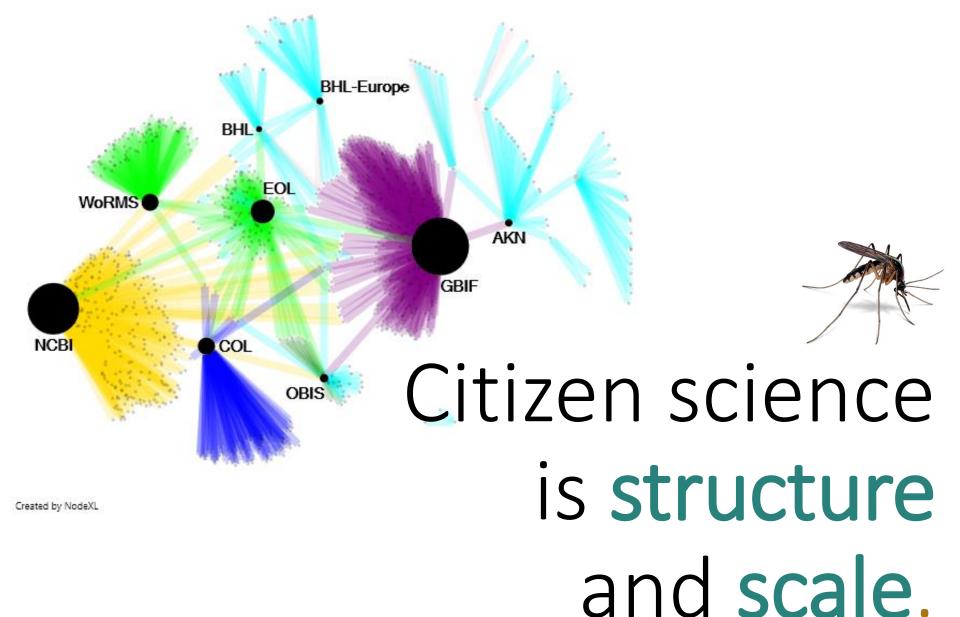


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Presentation Prepared for GEO Week 2017





Global Mosquito Alert: History

- **2014-present:** CS Mosquito monitoring begins (everywhere)
- **2015**: (ECSA) Conference in Barcelona
- **2016**: ECSA Policy Working Group charters a Mosquito Task Force
- **2017**: UNEP host a workshop in Geneva

"The Global Mosquito Alert will be an open, common set of protocols, platform, and toolkit that is augmented with modular components created to meet both global and local research and management needs."

2017: NASA DEVELOP





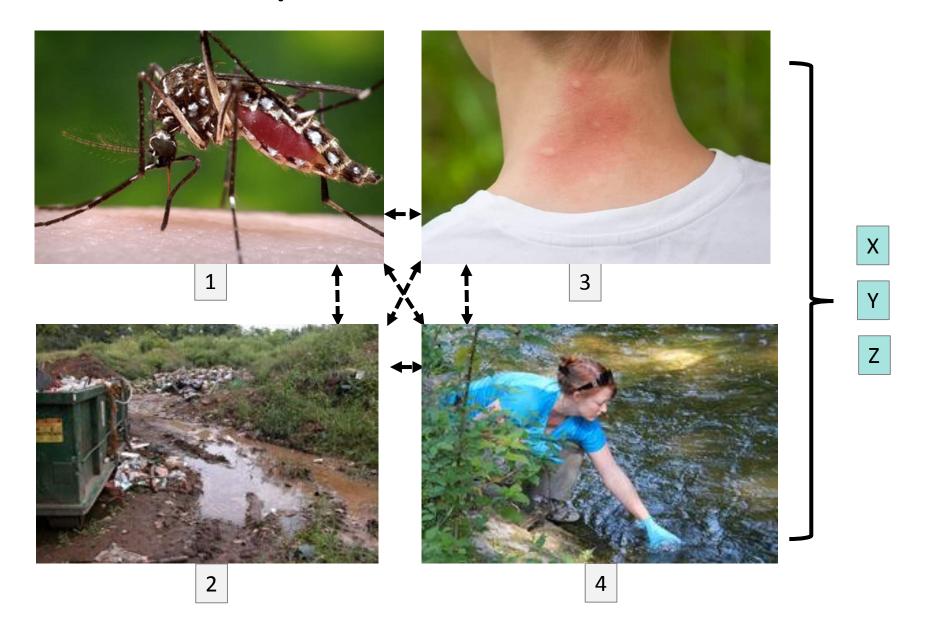








Global Mosquito Alert: 4 Protocols



Global Mosquito Alert: Partners

Mosquito Alert, Spain/ Catalonia

- Aedes albopictus (Zika) and Aedes aegypti (yellow fever)
- App + visualization platform for species presence via photo and breeding site
- 9,301 reports (3,473 validated)





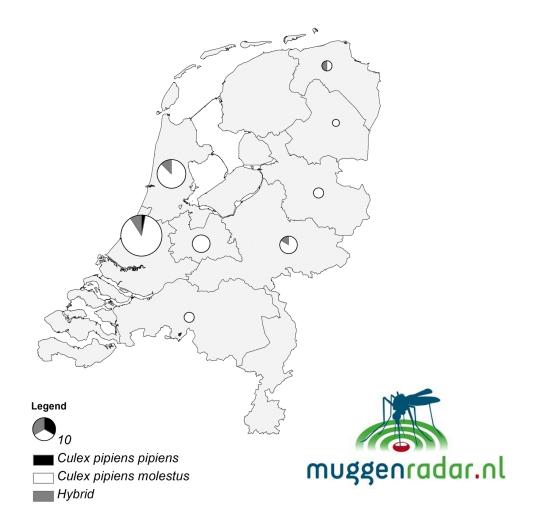




Global Mosquito Alert: Partners

Muggenradar, Netherlands

Any and all species for forecasting





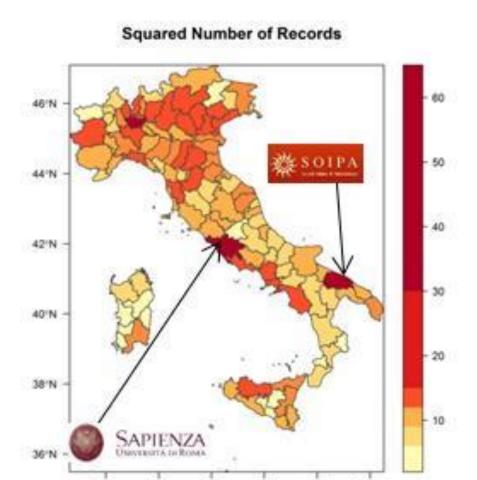
5236 citizen scientists193 pictures (all)3593 samples (all)

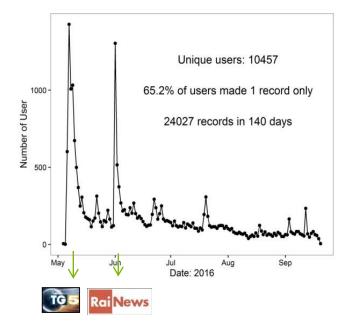




Global Mosquito Alert: Partners

Zanzamapp, Italy





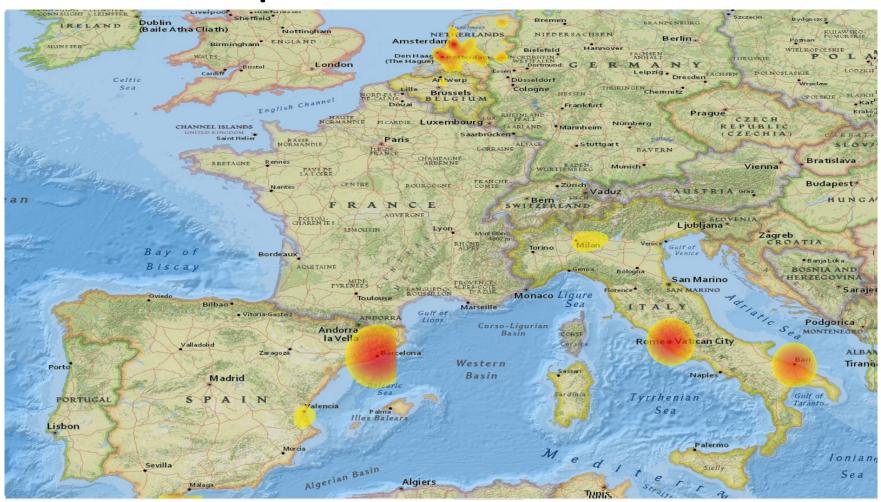
10,457 observations

- Aedes albopictus Culex pipiens
- General public
- Insecticide sprayings





Global Mosquito Alert





Early Findings with MODIS and SRTM (++)

- Not all data are "good," "open," or "obvious."
- Value to integration ... no issues beyond other scientific research.

Lessons for Citizen Science Standards

Tools for data collection.

Protocols for data collection.

Methods and processes for collaboration.

Transdisciplinary

data and metadata formats, including information about projects and observations.

Information including alignment with standards.

Common and flexible and maybe a little bit generic.

Processes and documentation of repeatable workflows.

Public Participation in Scientific Research (PPSR)-Core

A Common Data Model (CDM) with three main schemas

HOW STANDARDS PROLIFERATE: (SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION: THERE ARE 14 COMPETING STANDARDS.





PPSR-Core

A Common Data Model (CDM) with three main schemas

1. Project (PDM)

A coordinated cluster of citizen science activities and data. Information describes the context and purpose for activities.

Key components of the PPSR-Core PDM schema are used to share data between SciStarter, ALA, CitSci.org, and the Federal Catalog.

2. Data Set (DDM)

Descriptive & contextual information about a collection of data records using a common method and data schema.

(ie. Metadata about a published collection of data)

10:n

may have

will have 1:n

3. Data (ODM)

Data records using a common method and data schema.

(eg. Physical/chemical water quality records collected over a series of data collection events at one or more sites)

PPSR-Core: History



























2010-2012

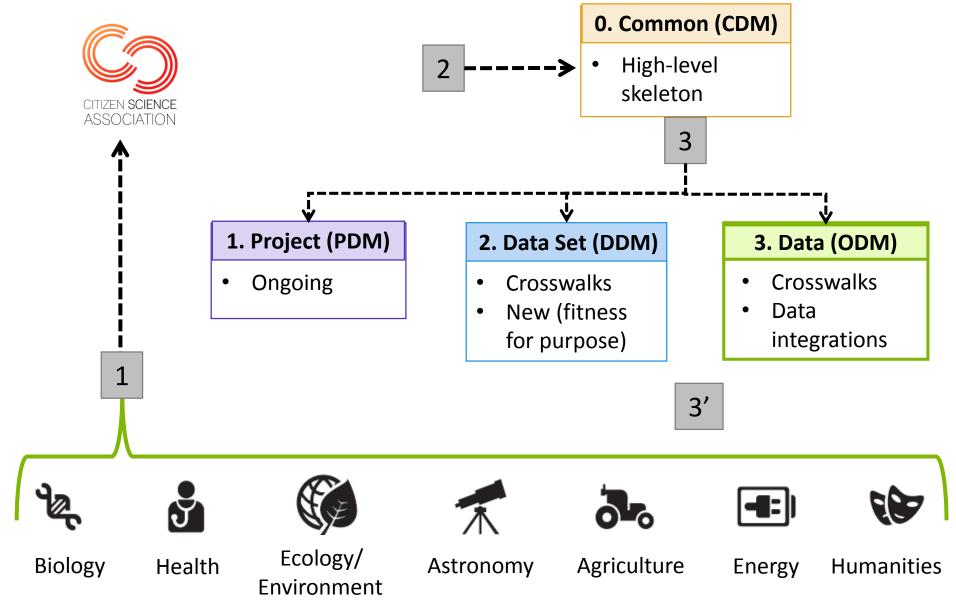
2013-2014

2015

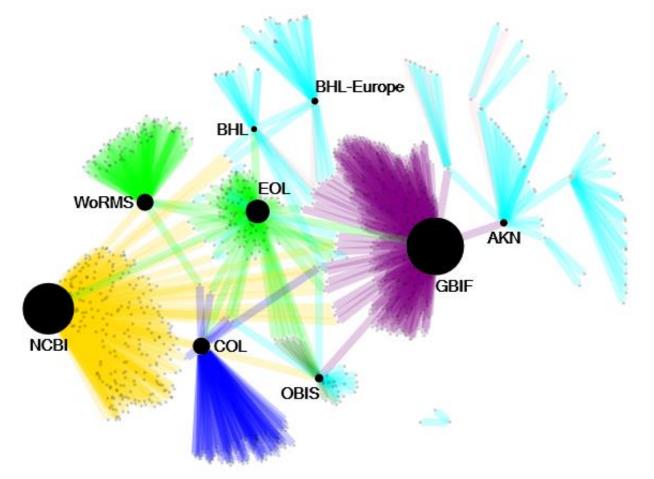
2016 +

- **Why**: Understand and document citizen science
- Why: Develop Project Metadata standards to share records between 4 databases
- Why: Build a 5th database that is compatible with the other 4
- Why: Create and document parallel processes for knowledge generation and use

PPSR-Core: Next Steps



source: http://www.sciences-participatives.com/en/Report





Created by NodeXL

Thank You

Stay in touch

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