Digital Geospatial Toolbox for Citizen Science Projects

GEO CS and Pre-University: building a bridge between school education and digital technology for geographic citizen science
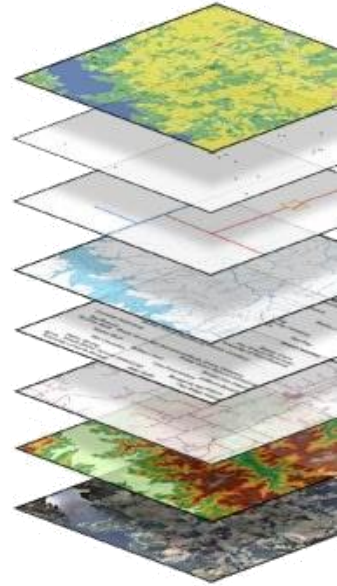

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First Network & Exchange Event Citizen Science Hub Twente
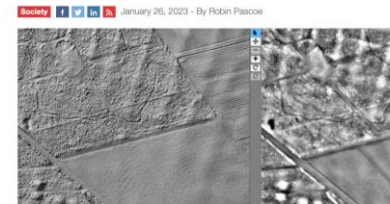6 April 2023, University of Twente, Enschede

Many citizen science projects produce **geospatial data**

- Geospatial data is information that describes objects, events or other features **with a location** on or near the surface of the earth.

- Geographic citizen science (**Geo CS**) uses manual measurements and in-situ, remote, and mobile sensors to collect* spatiotemporal data.

- **ITC Geo CS Hub** aims to promote and streamline research and education activities that would attract new learners as well as research partners.

  https://itc.nl/research/open-science/citizen_science/

HELP TO VALIDATE GLOBAL LAND COVER

earthwatch EUROPE
FRESHWATER Watch
Investigating the health of global freshwater ecosystems

Citizens archaeology project finds hundreds of new burial mounds
Society   January 26, 2023 - By Robin Pascoe
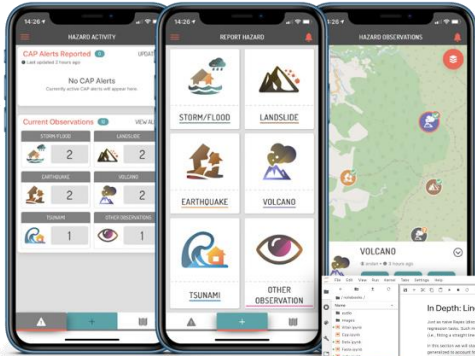

Citizen Scientists Help Smithsonian Conservation Biology Institute Track Cats and Coyotes
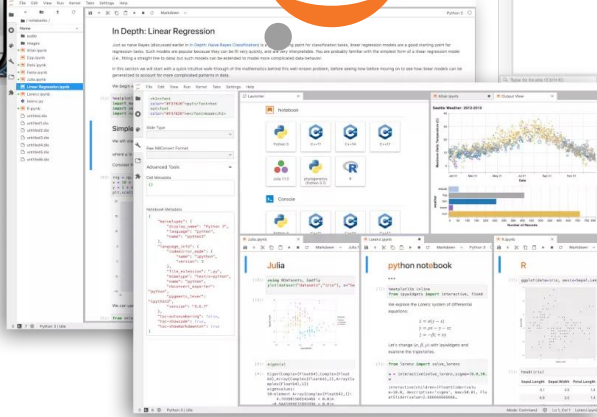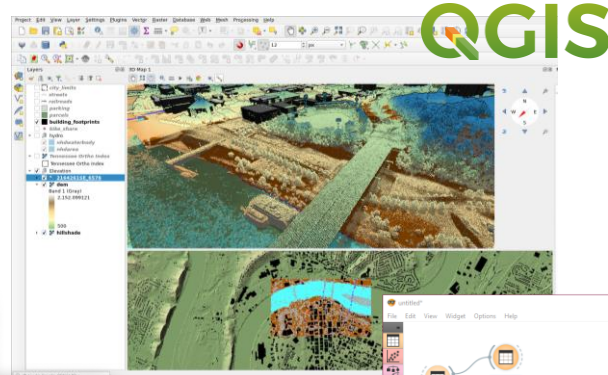
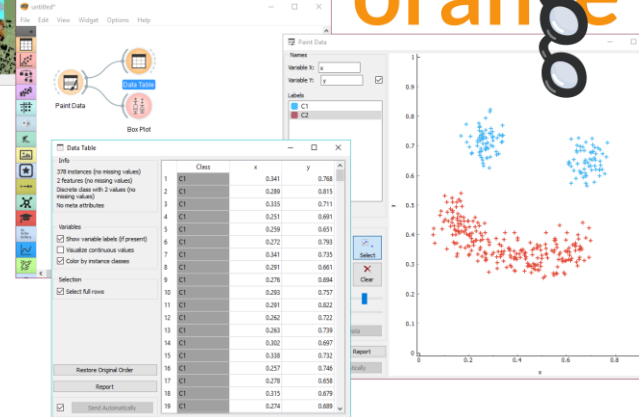# Digital tools help to collect and analyse geospatial data

Mobile Applications

Interactive Notebooks

Desktop GIS

Visual Data Analysis

Online **computing platforms** facilitate access to tools

- **They are accessible through a web browser**
  No need to install software

- **Tools and applications are ready to use**
  No need to setup and update

- **Analysis-ready public assets can be provided**
  OpenStreetMap, NL TOP10-1000, etc.

- **Assets can be shared easily shared**
  No need to transfer data

- **They are efficient and cost* effective**
  Even available for free

ONE-STOP GEOSPATIAL DATA ANALYSIS PLATFORM

Do you need an infrastructure to analyse geospatial data? Do you need p... or GPU-assisted computing capabilities for machine learning and AI ap... (big) geospatial data?

You are at the right pl...

Welcome to the ITC Geospatia... ...tform!

https://crib.utwente.nl

Geospatial Computing Platform
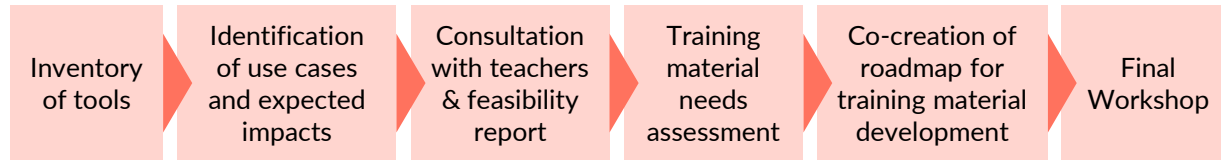
CRIB

https://storyset.com

Training is needed to **enable better use** of tools & platforms

- The **threshold** to start using them is currently high and any serious attempt to support Geo CS requires a **well-designed approach** with targeted training.

- This includes **primary and secondary school** students, whose curricula pay special attention on **digital technology** and promote **involvement** to citizen science activities.

How **pre-university** students and teachers can be supported to use a modern **digital toolbox** for Geo CS projects?

- In cooperation with UT Pre-U, a **feasibility study** will be performed to identify how the Geospatial Computing Platform and available tools can be used for CS activities.

- Potential **use cases** and expected impacts will be documented.

- A **roadmap** for developing training material for the target audience will be prepared in consultation with teachers.

Inventory of tools	Identification of use cases and expected impacts	Consultation with teachers & feasibility report	Training material needs assessment	Co-creation of roadmap for training material development	Final Workshop

The study is funded by the ITC Geo CS Hub Seed Fund.

We had the first workshop during the **NLT Conference**

16 February 2023, Doorn
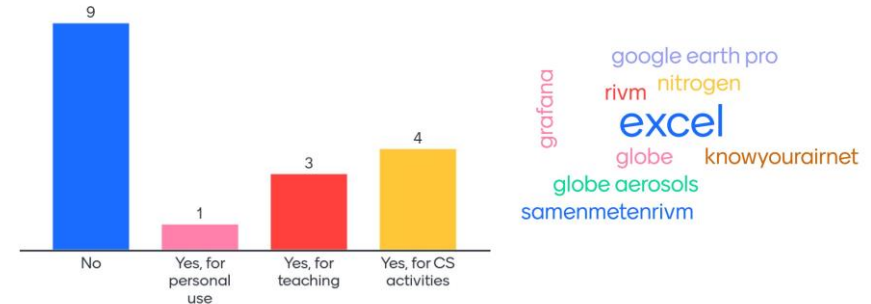
What is your experience with citizen science?
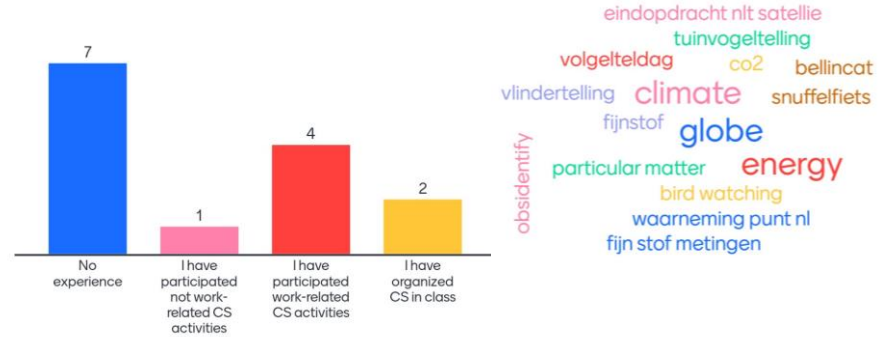
Which (geo)data analysis tools do you use?

Please **contact us** for collaboration or questions!

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Here's More Information!

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