

# OpenStreetMap: an opportunity for Citizen Science



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OpenStreetMap (OSM, https://www.openstreetmap.org) is currently the largest, richest, most up-to-date and complete open geospatial database, in the world. OSM is probably the most popular crowdsourced geographic information project in the world.



#### OSM and science

There are various research topics related to OSM, mainly focused on:

- use of the data for scientific. domain-specific purposes
- analysis of contribution patterns
- engagement with the community (CS)



### What you can find (and contribute) to OSM

Thousands of map features with a simple data model and a flexible and extensible tagging system, e.g.:

- Land use
- Natural phenomena (rivers, lakes, forests, valleys, ...)
- Buildings and road networks
- Points of interest (hospitals, hotels, ...)

## Main OSM pros

- Worldwide project
- Community-driven
- Multilingual community
- Local knowledge applied to global goals
- Open data (ODbL licence)
- Open ecosystem of tools and services
- Feature-rich and detailed data model supporting micromapping

## How you can use OSM (maps and tools)

Background maps in many different flavours. Services to download and extract data, monitor contributions, perform quality checks, etc Smartphone apps with several different users and goals in mind:

- Easy collection of georeferenced data
- Navigation
- Mapping
- Track recording
- Augmented reality
- Travel planning
- Gamification projects



## How OSM and Citizen Science can help each other

#### **OSM can contribute to CS** in different ways:

- tools and services for collection and extraction of geospatial information,
- background maps in different flavours.
- data and products open licensing.
- sustainability and preservation of Citizen Science data.
- project governance.
- community engagement

#### Citizen Science can contribute to OSM with:

- valuable, verified data that will improve an open data ecosystem ensuring accessibility and reusability by everyone,
- attract/involve new people in the contribution to OSM.
- extend OSM both geographically and thematically,
- custom tools serving specific CS needs that might be integrated in the OSM technical ecosystem

Useful OSM links: mailing lists, wiki, Telegram groups, Learn OSM, weeklyosm.eu

