

Humanitarian OpenStreetMap Team

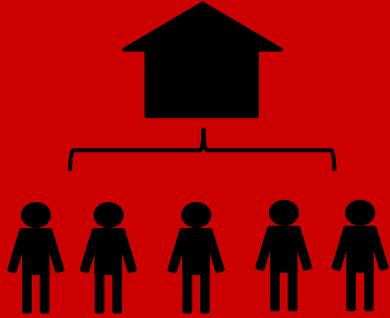
ramya.ragupathy@hotosm.org

What is the Humanitarian OpenStreetMap Team?

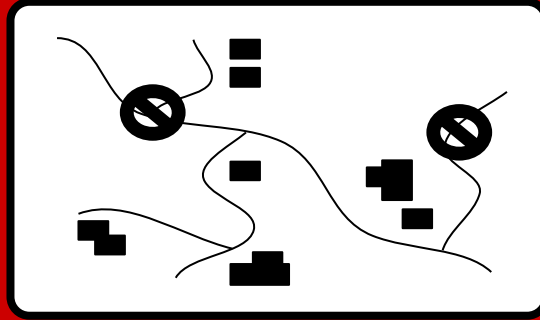


During a crisis, disaster or epidemic, maps are crucial to help responders

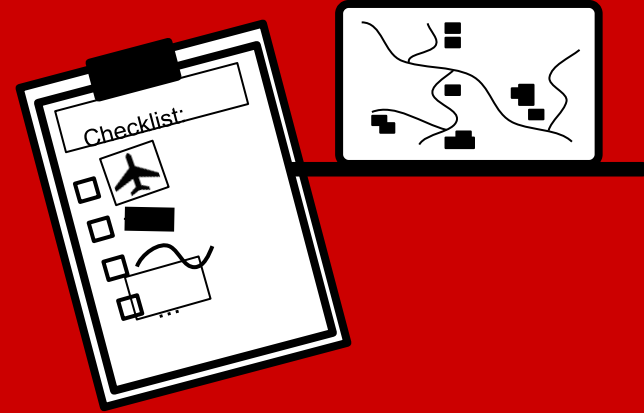
Maps Help



Identify areas of high
population
(building density)



Navigate access routes and
safe roads in affected areas



Locate suitable areas for
response command posts, shelter
and aid provision



Gbarnga, Liberia

GBARNGA

Google



Not Everywhere is Mapped
- or has Accessible Maps

The Humanitarian OpenStreetMap Team helps solve this problem by coordinating public efforts

- to map and label areas affected by disasters



OpenStreetMap

Edit

History

Export

GPS Traces User Diaries Copyright Help About

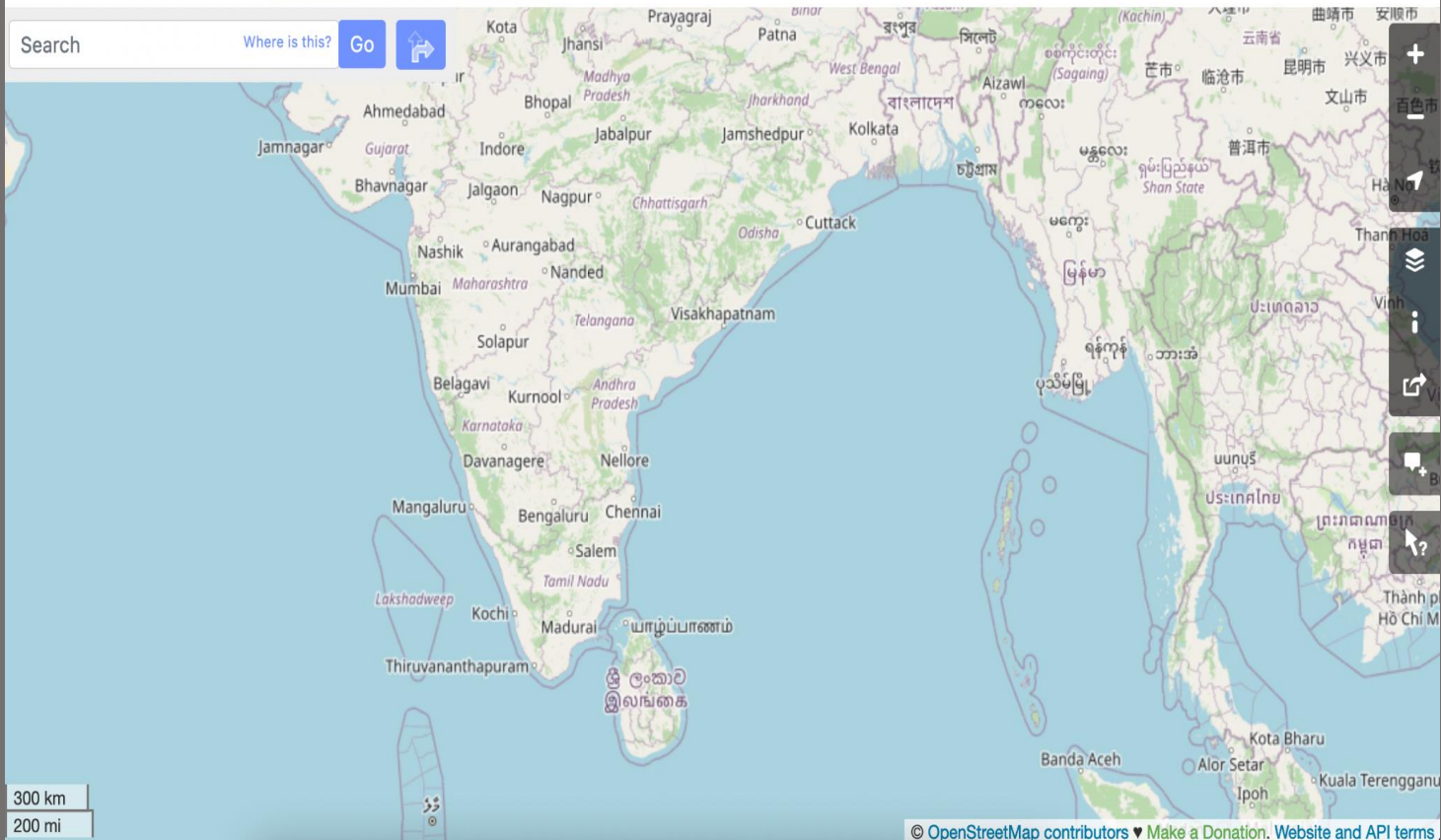


ramyaragupathy

Search

Where is this?

Go



300 km

200 mi

© OpenStreetMap contributors Make a Donation Website and API terms

OpenStreetMap

is a collaborative project to create a free editable world map

OpenStreetMap



This collective mapping - or the 'crowdsourcing' of geographic information began in 2004

Created by people for the people - Wikipedia of Maps!



Open Data Commons Open Database License (ODbL)

Can be used in apps, online maps, and printable maps for free - as long as the contributors are credited

OSM WORKS THROUGH

Local knowledge
Community organization



DATA IS

Built by a community of mappers that contribute and maintain data



anyone can add to the map



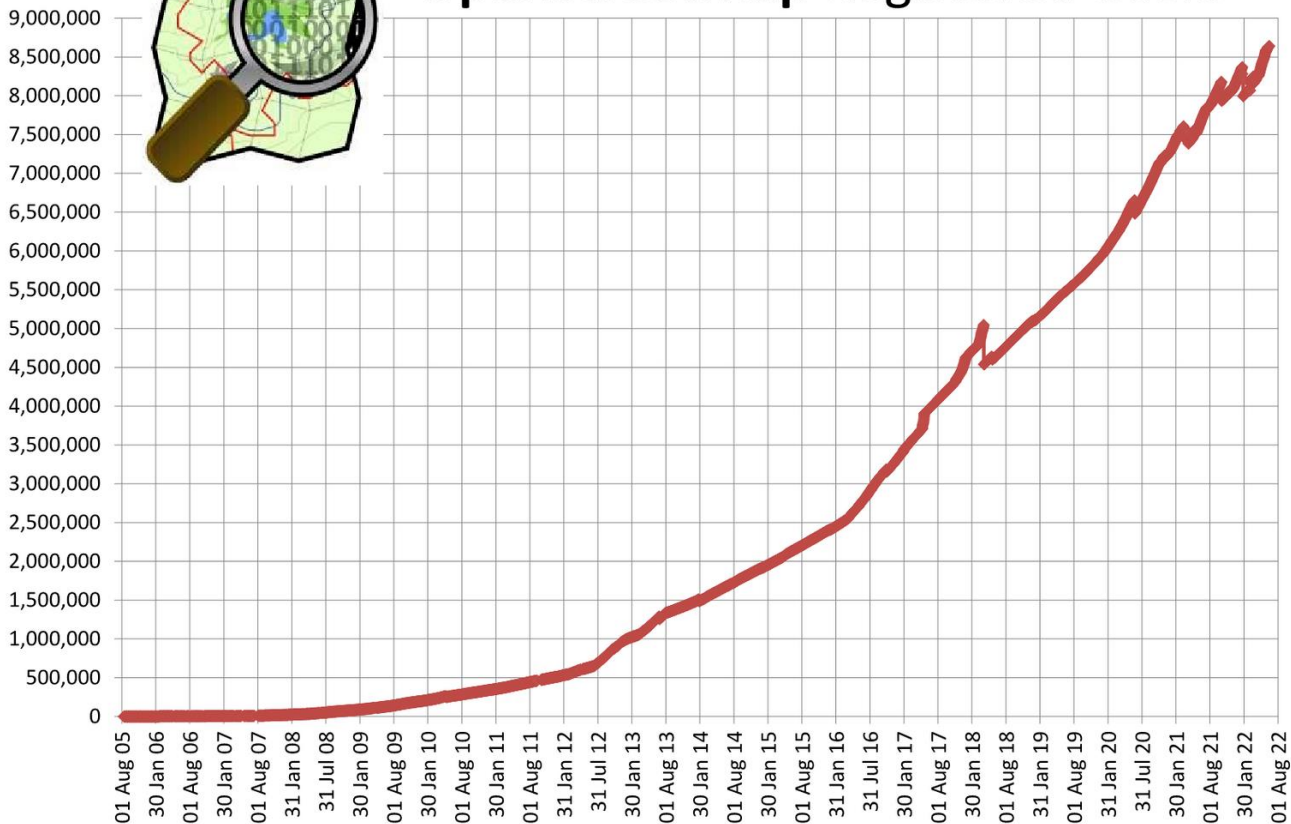
improve it with local knowledge

and use it for any purpose





OpenStreetMap Registered Users



OSM now has
over **8.5 million**
registered users

HOT responses predominantly require mappers to digitise satellite imagery



Obtain up-to-date satellite imagery for the area

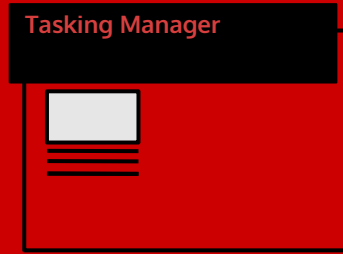


Digitise roads, tracks, paths, building, open areas, waterways, etc



Upload the data and see the changes

HOT harnesses the OSM volunteer community and coordinates the mapping of affected areas



Disaster occurs!

HOT asks OSM
community to help map
affected area

Across the globe the HOT-
OSM community map



Mapathon



HOT Tech Tools



EXPLORE PROJECTS

MY CONTRIBUTIONS

MANAGE

LEARN

ABOUT



Difficulty level ▾

More filters

Sort by ▾

Search Projects

Clear filters

Show map

Showing 14 of 3,810

<p>HIGH</p> <p>#5942 Mapping elements at risk in JRasulov and Spitamen Districts, Tajikistan for National scale Multi hazard</p> <p>Mapathon 2 - Building footprint mapping in JRasulov and Spitamen districts</p> <p>1393 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#6665 Cucuta Colombia #MigrationCrisis</p> <p>Colombia has seen an influx of refugees moving through the Cucuta border area</p> <p>2020 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#6979 Missing Maps: Forecast-based Action in Central Asia</p> <p>Central Asia is a region which is especially prone to natural disasters.</p> <p>847 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#7620 Tanzania missing buildings and roads Rapid</p> <p>Adding roads and buildings to the OSM base map</p> <p>911 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#8189 Mapatón COVID-19 Medellín - Comuna 2</p> <p>Con el avance del virus COVID-19 en Colombia, en donde hasta la fecha se han reportado más de 2000 casos</p> <p>416 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#8233 Missing Maps: Residential areas - Beboto district, Chad</p> <p>'VALIDATION NEEDED' MSF teams working in the Beboto district</p> <p>139 total contributors</p> <p>Beginner Mapper</p>
<p>HIGH</p> <p>#8237 Mapping to improve flood risk and preparedness #Lahj #Tuban #Yemen</p> <p>Mapping to improve flood risk and preparedness #Lahj #Tuban #Yemen</p> <p>579 total contributors</p> <p>Intermediate Mapper</p>	<p>HIGH</p> <p>#8317 #URBELatam #Covid-19 Mapping for Equitable Resilience in Morro do Diavotão</p> <p>Risk, vulnerability and resilience have different meanings for different communities</p> <p>150 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#8697 Lilongwe Flood Risk Assessment</p> <p>A World Bank project in support of the Government of Malawi to assess and manage flood risks in Lilongwe</p> <p>661 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#8723 Cyclone Amphan - Gosaba - Basanti, West Bengal</p> <p>Super cyclonic storm Amphan caused widespread damage over West Bengal and Odisha in May 2020</p> <p>710 total contributors</p> <p>Intermediate Mapper</p>	<p>HIGH</p> <p>#8764 COVID -19-Ngwatsek District-02, Botswana</p> <p>HOT has been requested to map areas in Botswana susceptible to, or affected by COVID-19</p> <p>276 total contributors</p> <p>Beginner Mapper</p>	<p>HIGH</p> <p>#8788 COVID-19 resilience strengthening in Marechal Rondon, Salvador, Bahia</p> <p>This activity aims to urgently map favelas in the city of Salvador. We need to know the location of all favelas</p> <p>213 total contributors</p> <p>Beginner Mapper</p>

Tasking Manager

Crowdsourced OSM mapping

Tasking Manager

Tool for coordination of volunteers and organization of groups to map on OpenStreetMap.

<https://tasks.hotosm.org>

Widely used within humanitarian organizations, local communities and for mapping teams of large companies.

Free and Open Source Software.

Mapping our world together hotosm.org

Tasking Manager EXPLORE PROJECTS MY CONTRIBUTIONS MANAGE LEARN ABOUT SUPPORT

ramyaragupathy

MAP FOR PEOPLE IN NEED

Join a global community that is mapping the places most vulnerable to disaster and poverty in order to support humanitarian aid and sustainable development across the world.

Start mapping

135.6M	2.8M	175.3M	409.5K	44
Buildings Mapped	Mapped Roads (Km)	Total Map Edits	Total Mappers	Mappers Online

#13404 | Open Mapping Hub Asia-Pacific

URGENT

[DISASTER RESPONSE] - PAKISTAN FLOOD 2022, NASIRABAD DISTRICT, BALOCHISTAN

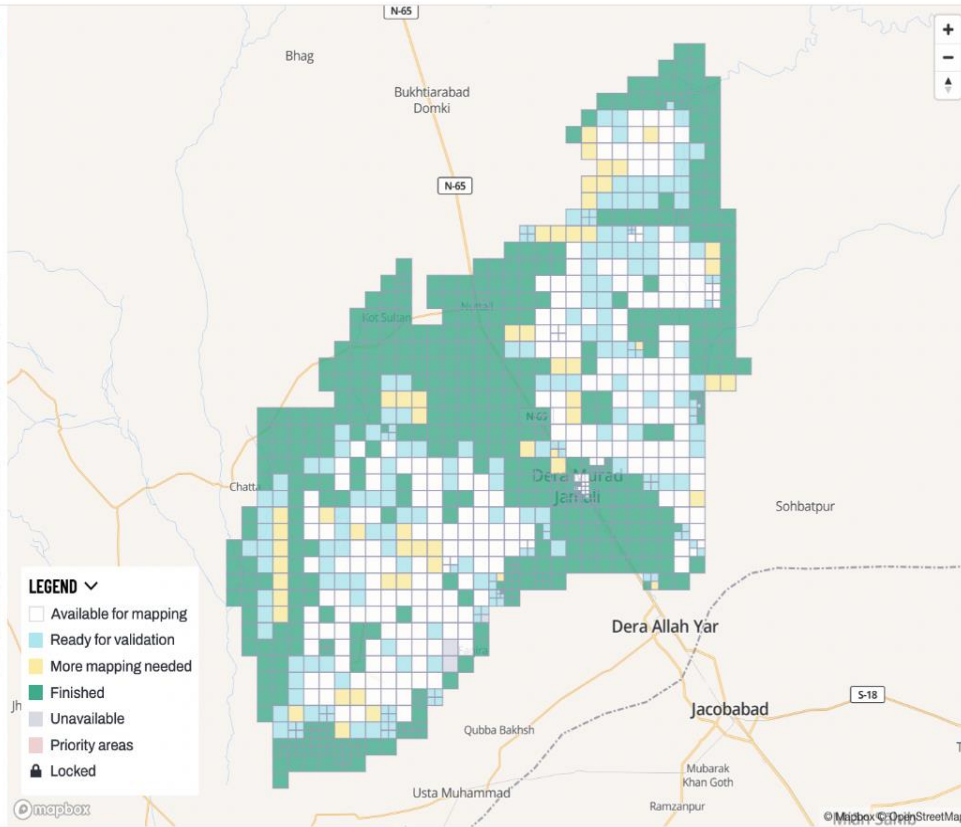
Pakistan: Floods, Monsoon Season 2022 · Pakistan

TASKS INSTRUCTIONS CONTRIBUTIONS

Filter tasks by id or username All Most recently updated

- Task #104** · Last updated by IsabelleFarley 2 hours ago Available for mapping
- Task #82** · Last updated by Knihovnik 4 hours ago Available for mapping
- Task #62** · Last updated by Knihovnik 4 hours ago Ready for validation
- Task #295** · Last updated by martien-176 5 hours ago Available for mapping
- Task #488** · Last updated by thpr 6 hours ago Available for mapping
- Task #467** · Last updated by thpr 6 hours ago Available for mapping

1 2 3 ... 171



LEGEND

- Available for mapping
- Ready for validation
- More mapping needed
- Finished
- Unavailable
- Priority areas
- Locked

TYPES OF MAPPING



IMAGERY

Any available source

EDITOR

iD Editor

Map a task

Search features
Search



#13404 | Open Mapping Hub Asia-Pacific

[DISASTER RESPONSE] - PAKISTAN FLOOD 2022, NASIRABAD DISTRICT, BALOCHISTAN · #154

2 hours left
COMPLETION INSTRUCTIONS HISTORY
Please check the history tab for relevant comments.

TASK STATUS
Is this task completely mapped?
 Yes
 No
 The imagery is bad

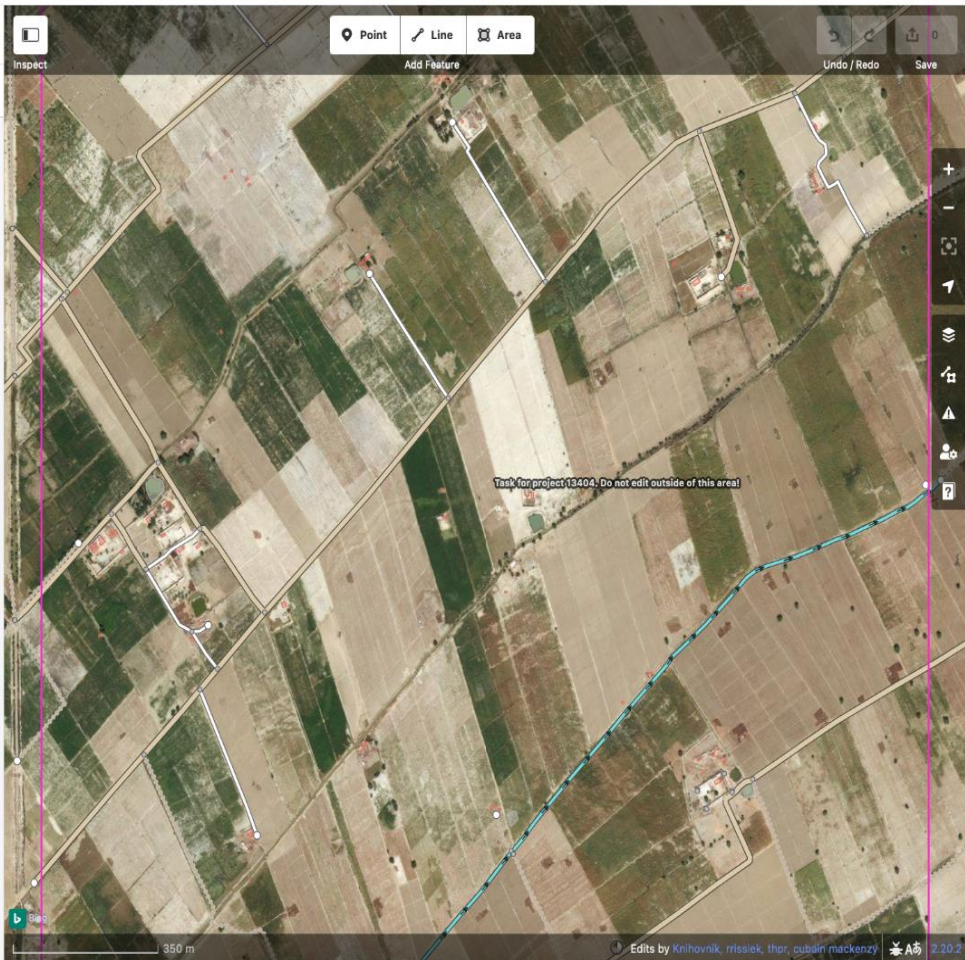
COMMENT

Submit task
Split task Select another task

RELOAD EDITOR
ID Editor Tasks map

Search features

Search



#13404 | Open Mapping Hub Asia-Pacific

[DISASTER RESPONSE] - PAKISTAN FLOOD 2022, NASIRABAD DISTRICT, BALOCHISTAN - #62

2 hours left

COMPLETION INSTRUCTIONS HISTORY 8 RESOURCES

TASK STATUS

Is this task well mapped?

#62 Yes No

RELOAD EDITOR

iD Editor

Tasks map

MANAGE ORGANIZATIONS + NEW

All My Organizations



ACTION FOR ECONOMIC REFORMS

ADMINISTRATORS


1



AFRICAN ASSOCIATION FOR GEOSPATIAL DEVELOPMENT (AGEOS)

ADMINISTRATORS


2



AMARA HUB

ADMINISTRATORS


4



BRIDGES TO PROSPERITY

ADMINISTRATORS


1



BYTEXPERIENCE

ADMINISTRATORS


2



CANOA DE TOLDA

ADMINISTRATORS


1



ADF HAITI

ADMINISTRATORS


1



AKROS

ADMINISTRATORS

4



AMERICAN RED CROSS

ADMINISTRATORS

3



BRITISH RED CROSS

ADMINISTRATORS


4



CANADIAN RED CROSS

ADMINISTRATORS

3



CARTONG

ADMINISTRATORS

4

Projects


[Add Project](#)



Title: Energy Infrastructure

Subtitle:

Author: Betsy Smalley

Date posted: Jan 14, 2020

This is an inquiry activity to introduce OpenStreetMap users to energy generation and transmission using OpenInfraMap.

Tags: [Environmental](#) [Industrialization and Economic D...](#)



Title: Creating Compelling Mapping Projects

Subtitle: How to create mapping projects that engage your students

Author: Steven Johnson

Date posted: Mar 10, 2020

One of the compelling features of open mapping is being able to connect geographic learning with projects that have immediate and tangible impact. Humanitarian mapping

Tags: [mapath...](#) [how...](#) [service learn...](#) [spatial citizens...](#) [open mapp...](#)



Title: Downloading and Mapping Data from OpenStreetMap using QGIS

Subtitle: Special Topics in Geography

Author: Eugene Chong

Date posted: Aug 20, 2020

This tutorial is an introduction to downloading and mapping data from OpenStreetMap using QGIS. OpenStreetMap, or OSM, is a free, editable map of the world created and edited

Tags: [Cities and Urban Land Use](#)



Title: OpenStreetMap Mapathon Pre-Event Instructions

Subtitle: Getting Started with OpenStreetMap

Author: TeachOSM

Date posted: Sep 18, 2020

For those of you who are new to OpenStreetMap, here are a few steps to take before joining a mapping event. This project walks you through creating an OpenStreetMap editing

Tags: [beginner](#) [account](#) [mapathon](#)



GETTING STARTED WITH
OPENSTREETMAP

Title: Module 1: Getting to Know OpenStreetMap

Subtitle: Getting Started with OpenStreetMap

Author: TeachOSM Contributors

Date posted: Aug 13, 2021

This module introduces both the instructor and students to the OpenStreetMap interface. Each of these activities entails the use of a tool, or utility on the OpenStreetMap website.

Tags:



GETTING STARTED WITH
OPENSTREETMAP

Title: Module 2: Adding to the Map

Subtitle: Getting Started with OpenStreetMap

Author: TeachOSM Contributors

Date posted: Aug 13, 2021

This module organizes basic OSM contributing resources for teachers to introduce to students to the concept of students making contributions to the OSM project. In this module, students will be fully prepared to contribute to the OSM project. Students will familiarize themselves with these mapping-ready resources and answer open-ended questions on important points of the three resources.

Tags:



GETTING STARTED WITH
OPENSTREETMAP

Title: Module 3: Making Your First Edits in OpenStreetMap

Subtitle: Getting Started With OpenStreetMap

Author: TeachOSM Contributors

Date posted: Sep 03, 2021

By now your students should have an OpenStreetMap account, be familiar with the OpenStreetMap interface, have located an area of interest, and are ready to map. In this

Tags: [ID editor](#)



GETTING STARTED WITH
OPENSTREETMAP

Title: Module 4: Using a Tasking Manager

Subtitle: Getting Started With OpenStreetMap

Author: TeachOSM Contributors

Date posted: Sep 21, 2021

The Tasking Manager is a key tool in the OpenStreetMap ecosystem because it helps organize a group of mappers working in the same place at the same time. It divides the mapping task into small, manageable chunks and prevents overlapping mapping efforts. The Tasking Manager is often the start and finish of a mapping task making it a critical tool to learn and use. The tool allows groups and organizations to highlight which areas of the

Tags:

Once areas are mapped, data is used by organisations to respond



HOT-OSM community
map areas

Map data is held in
the OSM database

Organisations use OSM data to
plan and coordinate their
response efforts

How do we get the data out of OpenStreetMap?



HOT-OSM community
map areas

Map data is held in
the OSM database

Organisations use OSM
data to plan and
coordinate their response
efforts

OpenStreetMap Tools



Overpass
Turbo



JOSM



QGIS



Export Tool

Custom OSM Extracts

Download OpenStreetMap Data

The Export Tool is an open service that creates customized extracts of up-to-date OSM data in various file formats. Download and use the data simply by crediting the OpenStreetMap contributors.

[Start Exporting](#)

Get Started

Sign up for an [OSM account](#) to start creating exports. Our [Quick Start](#) guide will get you using the tool straight away, or read about the Export Tool in more detail through the [Learn](#) page.

Export Tool

The application allows anyone to create custom extracts of OSM based on the area and the type of data to be accessed.

Access up-to-date geospatial information from OpenStreetMap's 8.5 million users

<https://export.hotosm.org/>

The screenshot displays the HOT Export Tool interface. The top navigation bar includes links for About, Learn, Create, Exports, Configs, HDX, English, and a Log Out button. The main content area is divided into two panels. The left panel shows details for an export run with ID #18d7a2a9-c286-4e74-a86c-e6f6f3dbd4a9, including its description, project name, area (29 sq km), creation date (Tuesday, April 10th 2018, 1:44 pm), creator (nsmith), and published status (Yes). It lists the export formats: Shapefile (.shp), OSM (.pbf), GeoPackage (.gpkg), and POSM bundle. Below this, there is a link for OSM Analytics and a set of buttons for Features, Re-Run, Clone, and Delete. The right panel shows details for a completed run with ID #426dcbdc-bc56-4807-92fa-cf4254cd5983. The status is 'COMPLETED'. It lists the start and finish times (Tuesday, April 10th 2018, 1:44 pm), duration (a few seconds), and the resulting files: Shapefile (.shp) gaborone_shp.zip (171 kB), OSM (.pbf) gaborone_export_pbf.zip (84.6 kB), GeoPackage (.gpkg) gaborone_export_gpkg.zip (374 kB), and POSM bundle gaborone-bundle.tar.gz (954 kB). On the right side of the interface, there is a map showing the location of Gaborone, Botswana, with various landmarks and a scale bar (5 km). The footer contains a Contact Us link, a note 'Made with ❤️ by HOT and friends', and a Fork the Code link.



1 Describe

2 Formats

3 Data

4 Summary

Name

Name this export

Description

|



Project

Which project activation this export relates to

Next

OpenStreetMap database last updated 3 hours ago

Search for a location or enter a bounding box as 'minX, minY, maxX, maxY'

SEARCH

Tools

BOX

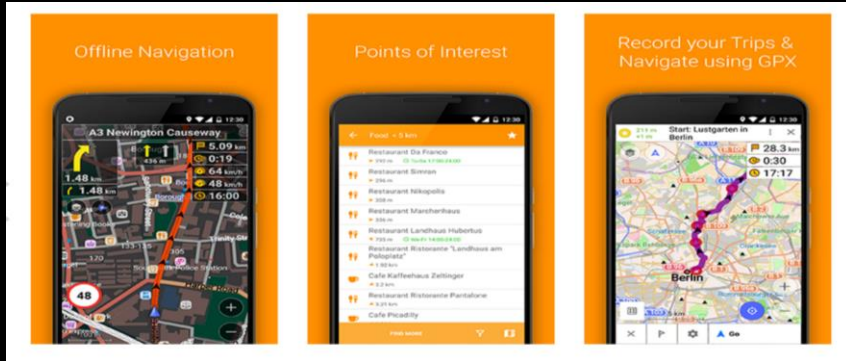
DRAW

THIS VIEW

IMPORT

5000 km

© OSM © OpenStreetMap contributors.



OSM data in different file formats

1 Describe

2 Formats

3 Data

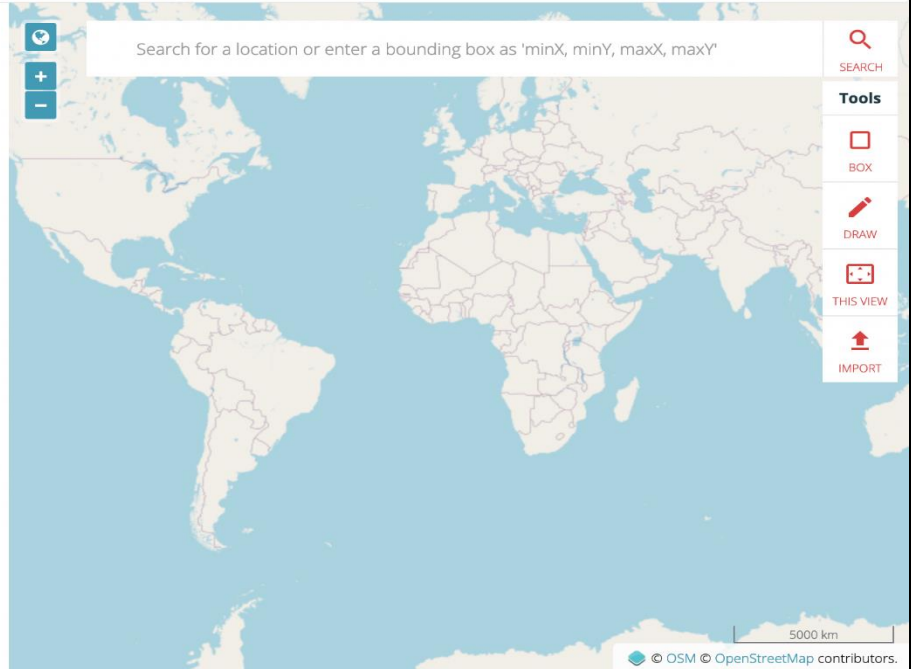
4 Summary

File Formats See [Learn \(Export Formats\)](#) for details on each file format.

- Geojson `.geojson`
- GeoPackage `.gpkg`
- Shapefile `.shp`
- Garmin `.img`
- Google Earth `.kml`
- OSM `.pbp`
- MAPS.ME `.mwm`
- OsmAnd `.obf`
- MBTiles `.mbtiles`

Next

OpenStreetMap database last updated 3 hours ago



OSM data in different file formats



1 Describe

2 Formats

3 Data

4 Summary

Tag Tree

Configs

YAML

Search for a feature type...

Clear

Buildings

- Building Names and Geometries
- Addresses
- Materials and Condition

Administrative Boundaries

- Boundaries

Commercial

- Shop
- Supermarket
- Restaurant
- Tourism
- Accommodation

Communication

Administrative Boundaries

Geometry types: polygon

Keys:

- name

Where: boundary='administrative'

Search for a location or enter a bounding box as 'minX, minY, maxX, maxY'

SEARCH

Tools

BOX

DRAW

THIS VIEW

IMPORT

5000 km

© OSM © OpenStreetMap contributors.

South India Boundaries

Description:

Id: 32a0267c-b224-4607-8310-c2973a47e4ef

Project:

Area: 6095 sq km

Created at: Wednesday, August 3rd 2022, 9:17 pm

Created by: [ramyaragupathy](#)

Published: Yes

Export formats: Geojson `.geojson`

OSM Analytics: [View this area](#)

Features **Re-Run** **Clone** **Delete**

Wednesday, August 3rd 2022, 9:17 pm

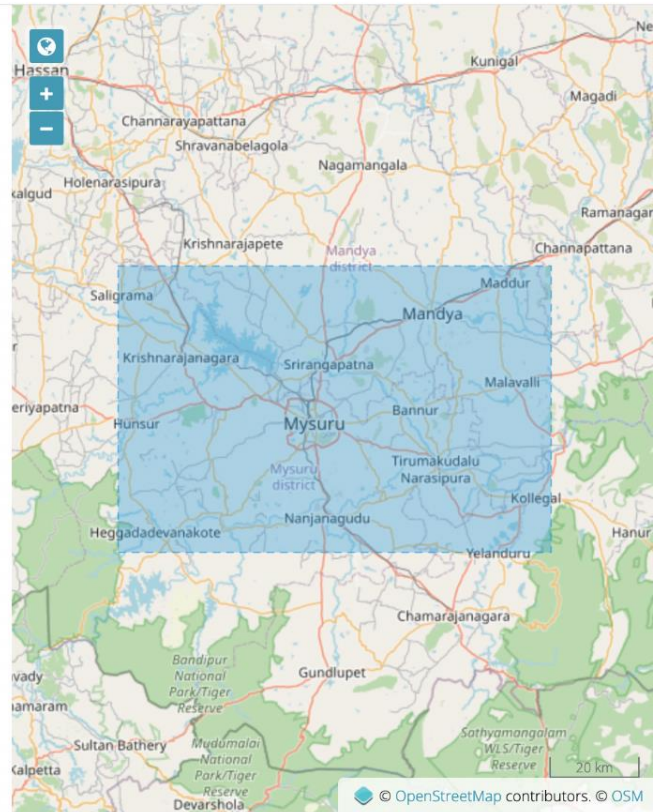
Status: **COMPLETED**

ID: c6477568-0599-42ac-9e1f-bd269562d5bb

Finished: Wednesday, August 3rd 2022, 9:17 pm

Duration: a few seconds

Geojson [South-India-Boundaries_GeoJSON.zip](#)
(0 B)



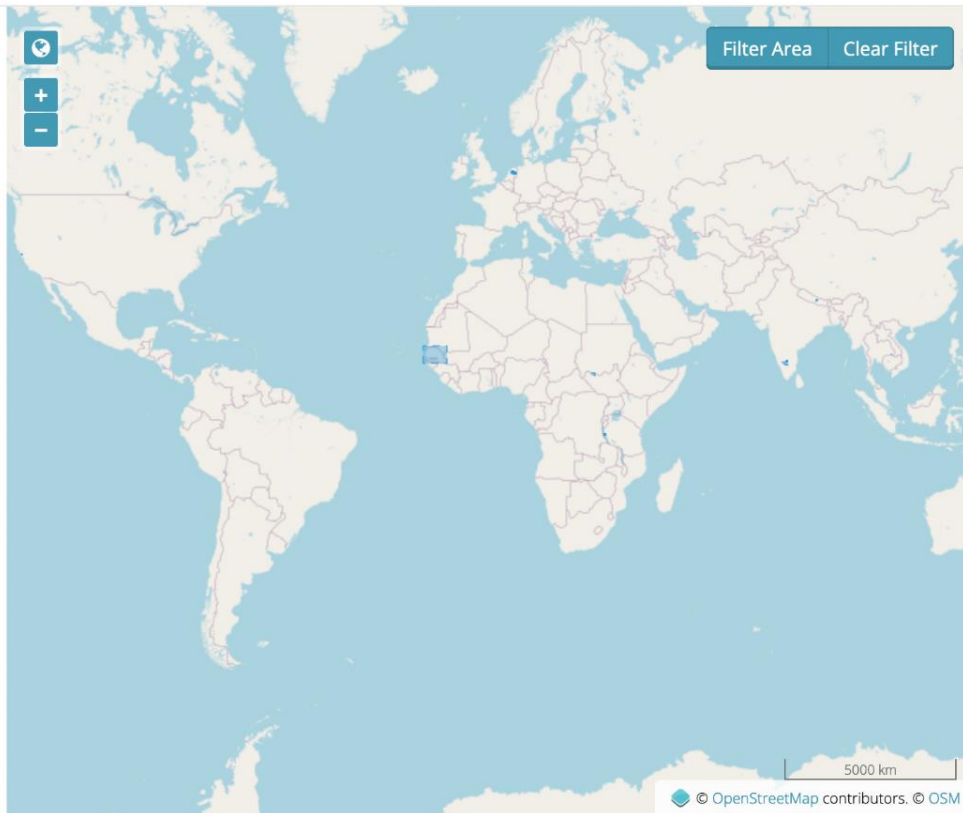
Exports

Date Range:

[Search](#)

Show all Exports

NAME	DESCRIPTION	PROJECT	CREATED	OWNER	
South India Boundaries			8/3/2022 9:17 PM	ramyaragupathy	
AugDeployment			8/3/2022 5:08 PM	ramyaragupathy	
Kathmandu_Buildings			6/10/2022 10:04 AM	ramyaragupathy	
BLR-Education			6/6/2022 6:47 PM	ramyaragupathy	
BLR_Buildings			5/31/2022 9:29 PM	ramyaragupathy	



Export Tool & HDX

[HDX](#) is a product of the [United Nations Office for the Coordination of Humanitarian Affairs](#) (OCHA)

Export Tool updates **500+ data exports** on a weekly basis for the HDX platform

Humanitarian OpenStreetMap Team (HOT)

Joined HDX in November 2014

23,484 total views of your dataset and organization pages on HDX

7,796 individual users visited your dataset and organization pages on HDX

16,326 total downloads of your datasets from HDX

4,099 individual users downloaded at least one of your datasets from HDX

Your datasets were most frequently downloaded from:

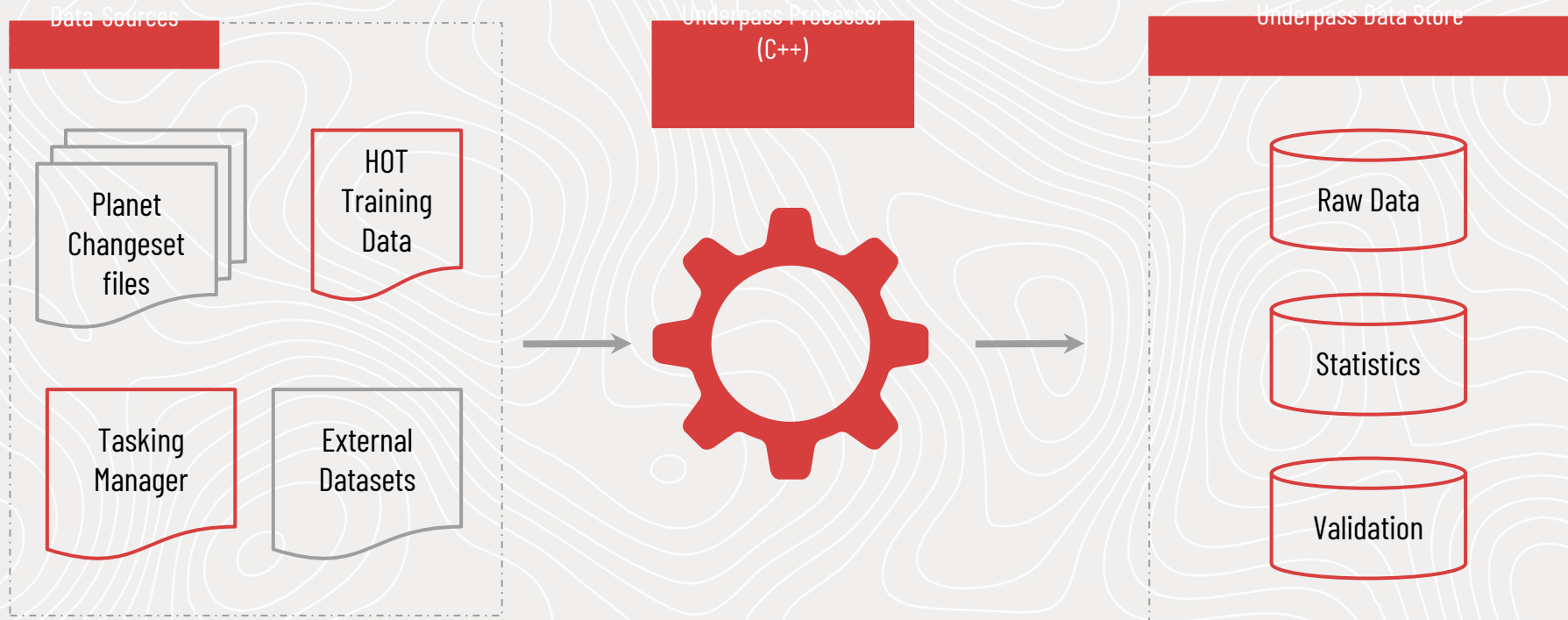
United States, Kenya, South Africa, UK,
India

Underpass

Underpass is a C++ processing script that helps in maintaining a custom OSM copy.

<https://github.com/hotosm/underpass>

Underpass



Galaxy API

Galaxy API helps in data retrieval from Underpass data source

<https://github.com/hotosm/galaxy-api>

The screenshot displays the Galaxy API documentation interface. On the left is a sidebar menu with various endpoints, including 'Get Countries' (GET), 'Login Url' (GET), 'Callback' (GET), 'My Data' (GET), 'Get Mapathon Detailed Report' (POST), 'Get Mapathon Summary' (POST), 'Get User Id' (POST), 'Get User Statistics' (POST), 'Get Hashtag Data Quality Report' (POST), 'Get Tasking Manager Project Data Quality Report' (POST), 'Get User Data Quality Report' (POST), and 'Get Hashtan State' (POST). The main content area is titled 'Galaxy API (1)' and features a 'Download OpenAPI specification: Download' button. Below this, the 'Get Countries' endpoint is detailed, stating it 'Generates geojson boundaries of countries covered by Galaxy'. A 'Responses' section shows a '200 Successful Response' with a sample JSON response. The JSON response is displayed in a dark-themed code editor with syntax highlighting, showing the 'type' as 'string', 'features' as an array, and 'bbox' as an array of four zeros.

Search...

- GET Get Countries
- GET Login Url
- GET Callback
- GET My Data
- POST Get Mapathon Detailed Report
- POST Get Mapathon Summary
- POST Get User Id
- POST Get User Statistics
- POST Get Hashtag Data Quality Report
- POST Get Tasking Manager Project Data Quality Report
- POST Get User Data Quality Report
- POST Get Hashtan State

Galaxy API (1)

Download OpenAPI specification: [Download](#)

Get Countries

Generates geojson boundaries of countries covered by Galaxy

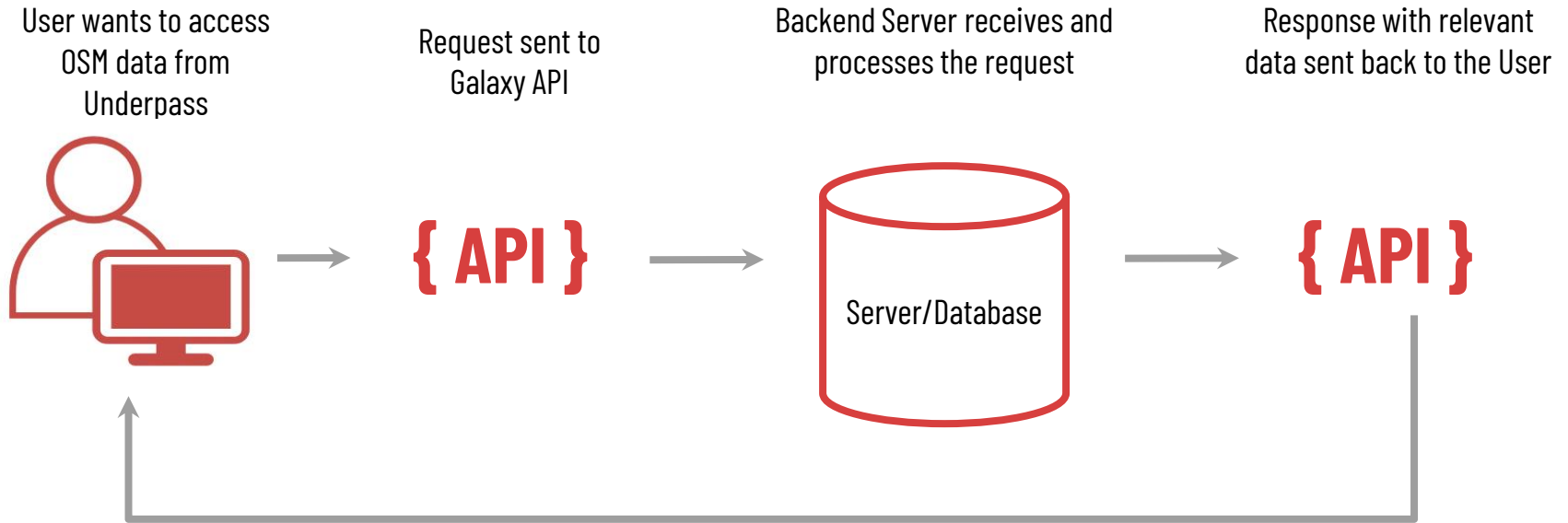
Responses

> 200 Successful Response

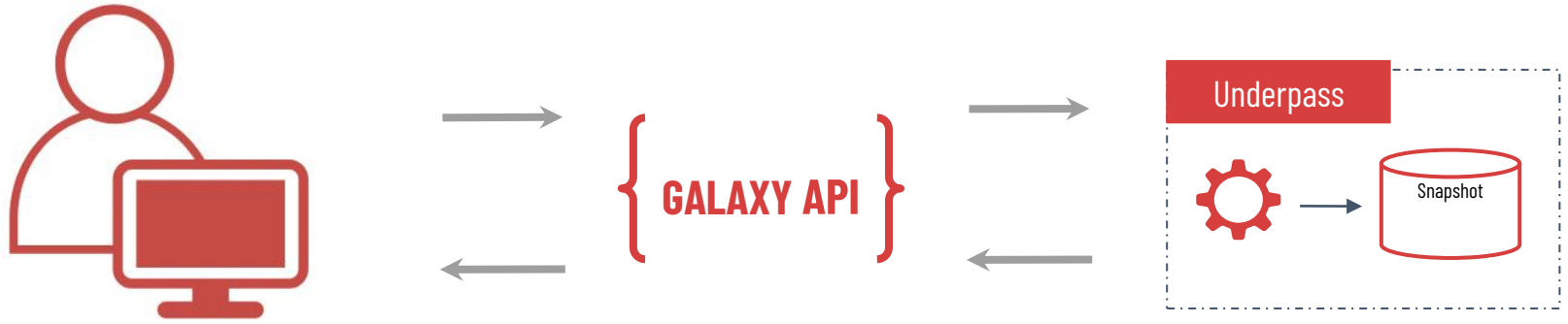
```
{
  "type": "string",
  - "features": [
    + { .. }
  ],
  - "bbox": [
    0,
    0,
    0,
    0
  ]
}
```



Application Programming Interface (API)



Visualising Data with Galaxy API



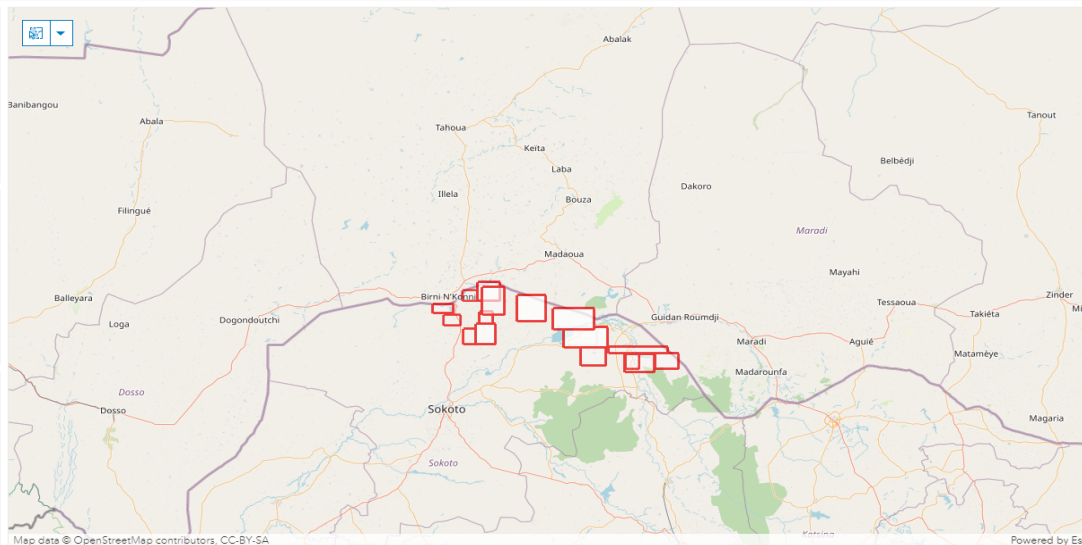
Projects:

25

🏠 6,728,436

Average number of contributors:

👤 16



Mapathon in Korea | 12/15/2021, 1:00 AM
corporate
hotosm-project-11897
17

Mapathon in CZ | 12/15/2021, 1:00 AM
corporate
hotosm-project-11897
44

Mapathon in Germany | 12/14/2021, 1:00 AM
school
hotosm-project-11897
38

Mapathon in CZ | 12/9/2021, 1:00 AM
SZS Beroun, Lenka Kratochvílová school
hotosm-project-11892

OSM Galaxy

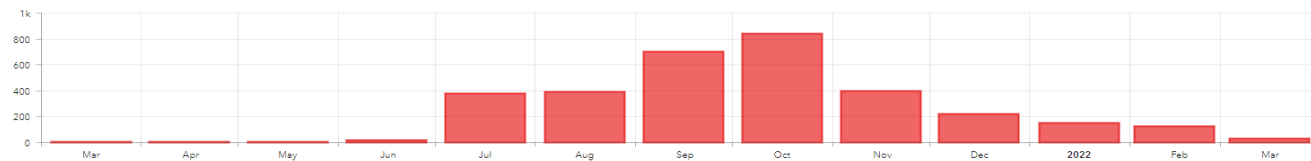
hotosm-project-11897 | | 3/18/2022, 1:00 AM
Unique contributors: 2
New buildings: 27
New roads meters: 0

hotosm-project-11897 | | 3/18/2022, 1:00 AM
Unique contributors: 2
New buildings: 27
New roads meters: 0

hotosm-project-11897 | | 3/18/2022, 1:00 AM
Unique contributors: 2
New buildings: 27
New roads meters: 0

hotosm-project-11897 | | 3/18/2022, 1:00 AM
Unique contributors: 2
New buildings: 27
New roads meters: 0

hotosm-project-11897 | | 3/18/2022, 1:00 AM
Unique contributors: 2
New buildings: 27
New roads meters: 0



MSF Visualising Underpass data with Galaxy API



OpenAerialMap

Create capacity for
damage assessments
and up to date maps



OpenAerialMap (OAM)

OAM is distributed catalogue and hosting service of imagery.

<https://openaerialmap.org/>

A user will be able to go to OAM and search to see what free imagery is available in the area they are interested in.

Imagery in this case means georeferenced photos from satellites, UAVs or other aircraft.

OpenAerialMap

OpenAerialMap (OAM) is a set of tools for searching, sharing, and using openly licensed satellite and unmanned aerial vehicle (UAV) imagery.

Latest uploads

- Франковская районная рада
2020-09-11 / 5 cm
Valeri Myronov
- Bodonci
2020-09-08 / 5 cm
ZGS ms
- kivenlahti-1130-ympyra
2020-09-09 / 5 cm
ainki
- Старая Русса. Курорт и окрес...
2020-09-08 / 6 cm
Sergey Astakhov

Search location or coordinates

Sign In

Laccadive Sea

Leaflet | © Mapbox © OpenStreetMap | Report an issue with this map



Search by region or HOT Project ID

Outline Custom Area

Buildings vs. Built-up

background map

Map Legend

OpenStreetMap buildings compared to data of built-up areas from "Global Human Settlement Layer". Read more.

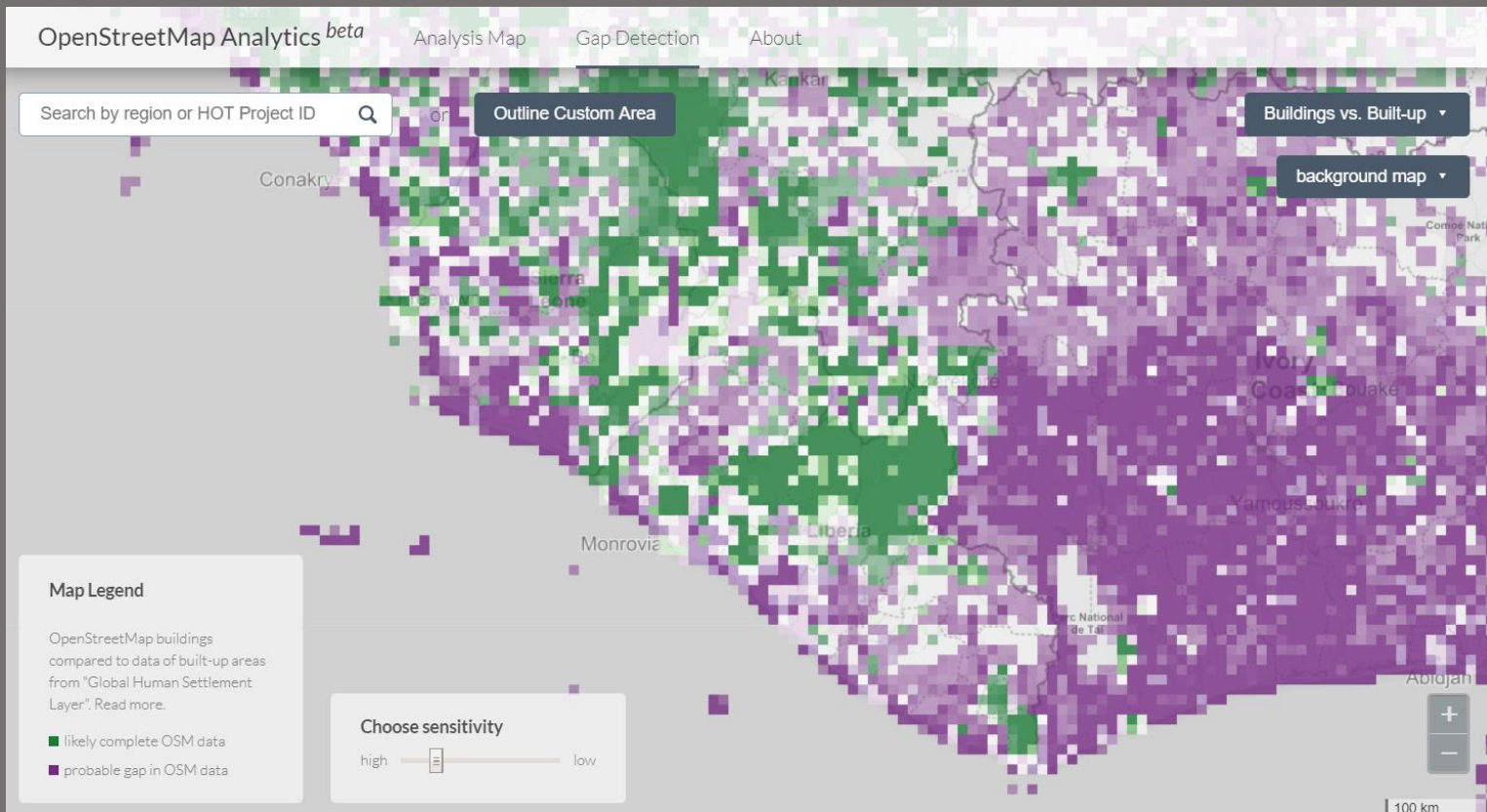
- likely complete OSM data
- probable gap in OSM data

Choose sensitivity

high low

OSM Analytics

Coverage & Gap Detection

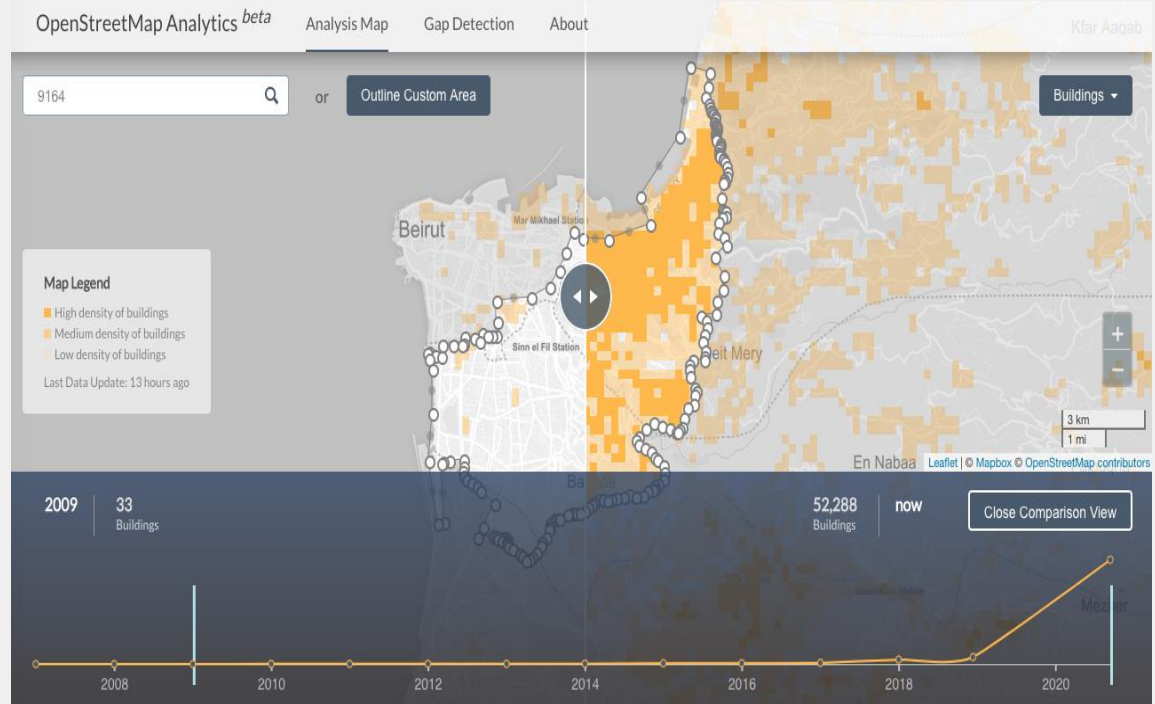


OSM Analytics

An online platform for real time analysis and visualization of the OSM database.

Lets you explore the entire OSM, from global to local scale and understand how the data was created over a time period.

<https://osm-analytics.org/>





Open Source

All our code is open on
GitHub

Why GitHub? Team Enterprise Explore Marketplace Pricing Search / Sign in Sign up

Humanitarian OpenStreetMap Team

An international team dedicated to humanitarian action and community development through open mapping.

Global <http://www.hotosm.org> @hotosm info@hotosm.org

Repositories 138 Packages People 36 Projects

Pinned repositories

tech

Resources and issue tracking for Technical Working Group and all things Tech within HOT. Start here to get more information about how to get involved in HOT.

☆ 49 🍴 11

tasking-manager

Tasking Manager - The tool to team up for mapping in OpenStreetMap

● JavaScript ☆ 291 🍴 167

osm-export-tool

Web service to download customised OSM data in various file formats

● JavaScript ☆ 87 🍴 33

OpenAerialMap

OpenAerialMap is an open service to provide access to a commons of openly licensed imagery and map layer services.

☆ 171 🍴 20

learnosm

LearnOSM.org content, Jekyll layouts & issue tracking. This repository is dedicated to helping people learn how to map in OpenStreetMap (OSM) and use many of the software and tools in the OSM commu...

● CSS ☆ 194 🍴 181

osm-analytics

OSM Analytics lets you interactively analyze how specific OpenStreetMap features are mapped in a specific region.

● JavaScript ☆ 80 🍴 30



Diversity

Internship programs



Google Summer of Code

Reach out to us

tech@hotosm.org