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
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 is a collaborative project to create a free editable world map.
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
DATA IS

Built by a community of mappers that contribute and maintain data

OSM WORKS THROUGH

Local knowledge
Community organization
anyone can add to the map
improve it with local knowledge
and use it for any purpose
OSM now has over 8.5 million registered users.
HOT responses predominantly require mappers to digitise satellite imagery.

1. Obtain up-to-date satellite imagery for the area.
2. Digitise roads, tracks, paths, building, open areas, waterways, etc.
3. 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
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.
The application is designed to divide up a mapping project into smaller tasks that can be completed rapidly with many people working on the same overall area. It shows which areas need to be mapped and which areas need the mapping validated.
Title: Energy Infrastructure
Subtitle: How to create compelling mapping projects that engage your students
Author: Betsy Smalley
Date posted: Jan 14, 2020
This is an activity to introduce OpenStreetMap users to energy generation and transmission using OpenStreetMap.
Tags: Environmental, Industrialization and Economic Development

Title: Creating Compelling Mapping Projects
Subtitle: How to create compelling 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: mapathon, how-to, service-learning, spatial citizens, openmap

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 by volunteers.
Tags: Cities and Urban Land Use

Title: OpenStreetMap Mapathon Pre-Event Instructions
Subtitle: Getting Started with OpenStreetMap
Author: TeachOSM
Date posted: Sep 19, 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 account.
Tags: beginner, account, mapathon

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:

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 the concept of students making contributions to the OSM project. In this module, students will familiarize themselves with these mapping-easy resources and answer open-ended questions on important points of the three resources.
Tags:

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 module, they will learn the basic editing skills.
Tags: Editor

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 users and organizations to highlight which areas of the task are currently being worked on.
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

Humanitarian Organisations
How do we get the data out of OpenStreetMap?

HOT-OSM community map areas → Map data is held in the OSM database → Humanitarian Organisations

Organisations use OSM data to plan and coordinate their response efforts.
OpenStreetMap Tools

Overpass Turbo

JOSM

QGIS
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/
Name
Name this export

Description

Project
Which project activation this export relates to

OpenStreetMap database last updated 3 hours ago

Next
OSM data in different file formats
OSM data in different file formats

File Formats: See Learn (Export Formats) for details on each file format.
- Geojson .geojson
- GeoPackage .pkg
- Shapefile .shp
- Garmin .img
- Google Earth .kml
- OSM .pbf
- MAPS.ME .mm
- OsmAnd .obf
- MBTiles .mbtiles

OpenStreetMap database last updated 3 hours ago
Administrative Boundaries

Geometry types: polygon

Keys:
- name

Where: boundary='administrative'
South India Boundaries

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

Project: 6095 sq km

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

Created by: ramyaragupathy

Published: Yes

Export formats: GeoJSON .geojson

OSM Analytics: View this area

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)
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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
- Total views of your dataset and organization pages on HDX: 23,484
- Individual users visited your dataset and organization pages on HDX: 7,796
- Total downloads of your datasets from HDX: 16,326
- Individual users downloaded at least one of your datasets from HDX: 4,099

Your datasets were most frequently downloaded from:
- United States, Kenya, South Africa, UK, India
Underpass is a C++ processing script that helps in maintaining a custom OSM copy.

https://github.com/hotosm/underpass
Galaxy API helps in data retrieval from Underpass data source

https://github.com/hotosm/galaxy-api
User wants to access OSM data from Underpass

Request sent to Galaxy API

Backend Server receives and processes the request

Response with relevant data sent back to the User
Visualising Data with Galaxy API
MSF Visualising Underpass data with Galaxy API
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.
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/
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

- **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 stars
  - 11 forks

- **tasking-manager**
  Tasking Manager - The tool to team up for mapping in OpenStreetMap
  - JavaScript
  - 291 stars
  - 167 forks

- **osm-export-tool**
  Web service to download customised OSM data in various file formats
  - JavaScript
  - 87 stars
  - 33 forks

- **OpenAerialMap**
  OpenAerialMap is an open service to provide access to a commons of openly licensed imagery and map layer services.
  - 171 stars
  - 20 forks

- **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 community.
  - CSS
  - 194 stars
  - 181 forks

- **osm-analytics**
  OSM Analytics lets you interactively analyze how specific OpenStreetMap features are mapped in a specific region.
  - JavaScript
  - 80 stars
  - 30 forks
Diversity Internship programs
Reach out to us

tech@hotosm.org