

OpenStreetMap for Humanitarian Response and Understanding Disaster Risk

Cristiano Giovando | 19 September 2016



Humanitarian
OpenStreetMap
Team

www.hotosm.org

 @hotosm

Maps and map data: critical tools in disaster response and to understand disaster risk

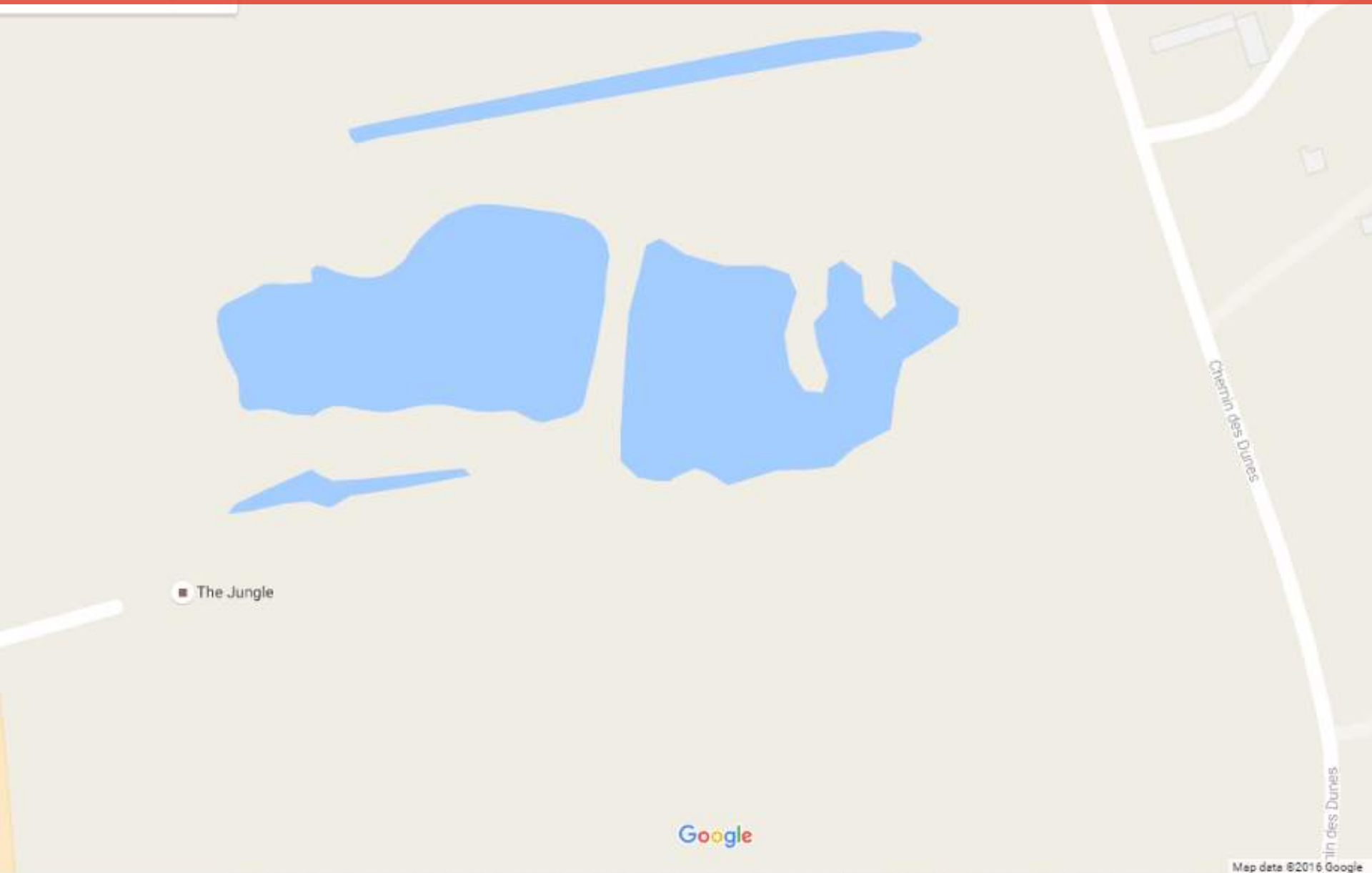


Photo courtesy American Red Cross

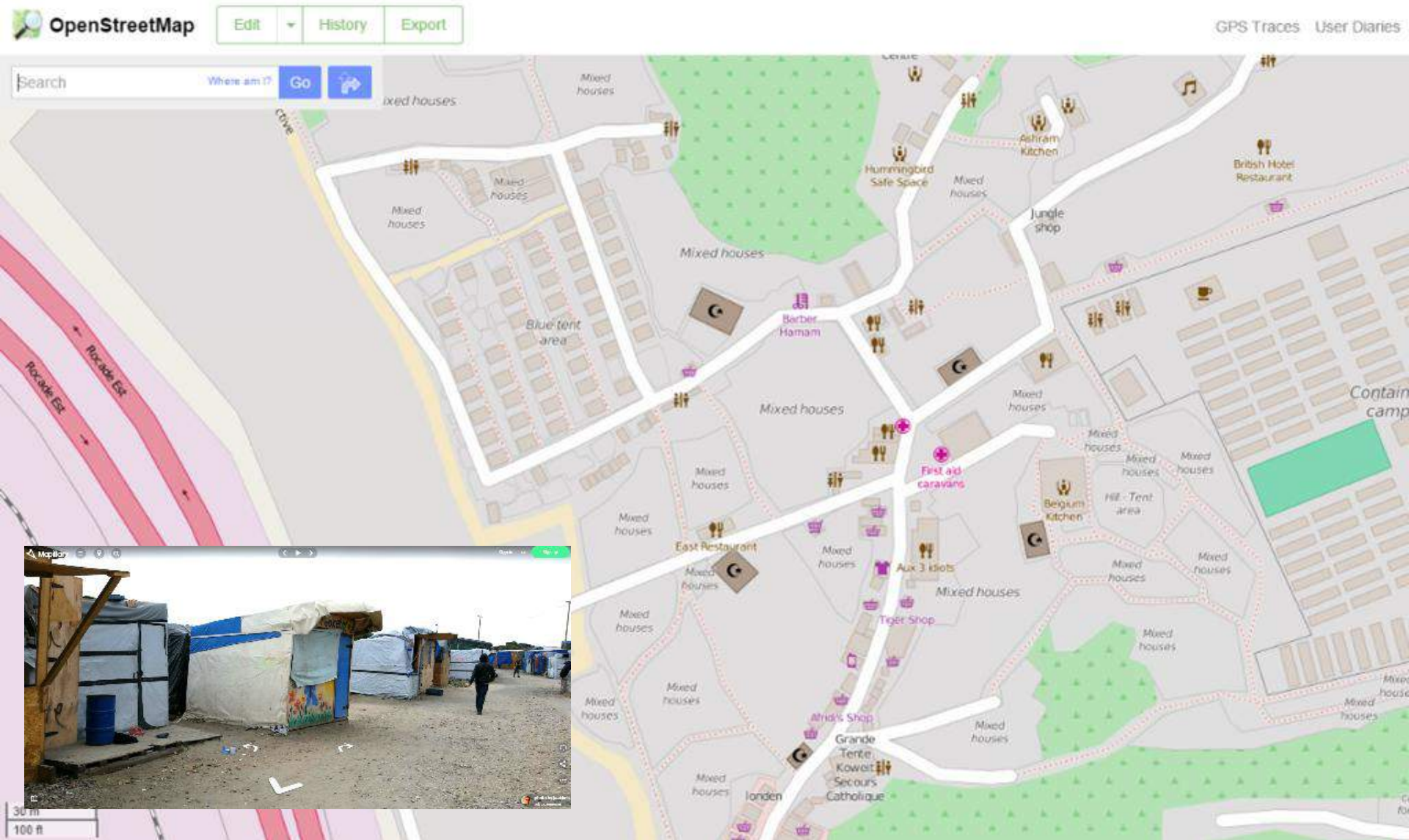
Problem: millions of people live in places that don't appear on the map in any level of detail



Believe it or not, not everything is mapped



Same location - different map



It takes a community...or rather, many of them

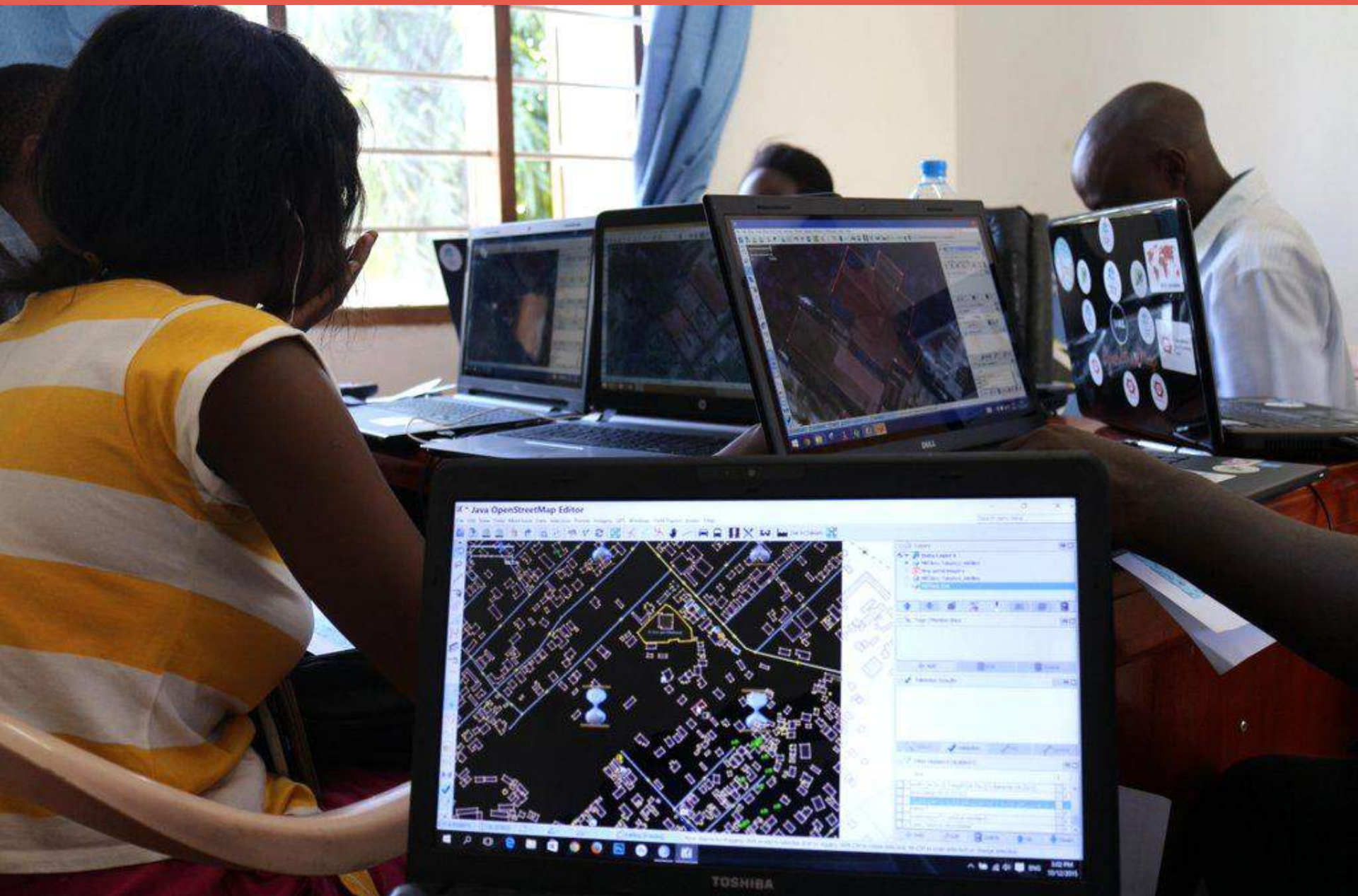




HOT makes this
happen:

training &
mobilizing
volunteers

Who map from their home, school, or office



Disaster Activations: Massive rapid response mapping

The image shows a screenshot of a Twitter post from the account HOTOSM (@hotosm). The post is overlaid on a map interface, likely OpenStreetMap, which shows a map of Sri Lanka with a green rectangular area highlighting a specific region. The Twitter post is as follows:

HOTOSM @hotosm Following

HOT is activating to support relief in Sri Lanka, if you have a few moments, please visit [tasks.hotosm.org/wiki.openstreetmap.org/wiki/2016_Sri_...](https://tasks.hotosm.org/wiki/openstreetmap.org/wiki/2016_Sri_Lanka)

RETWEETS 69 LIKES 29

2:41 PM - 18 May 2016

Reply to @hotosm

Trends

- #RingsMovie Promoted by Rings Movie
- Leslie Jones
- #WednesdayWisdom
- #NationalWaBeDay
- Guaranteed Rate Field
- Earth-like
- American University in Kabul
- Proxima Centauri
- #Proximab
- #AdobeChat
- #AdweekChat

HOTOSM @hotosm follows you

We are the Humanitarian OpenStreetMap Team. Our focus: OSM for humanitarian response & economic development. #mapthedifference #opendata #openstreetmap

Joined May 2010

© 2016 Twitter. About Help Terms Privacy Cookies Ads info

We use open source, scalable web-based tools

#2159 - Earthquake in Uganda and Tanzania, 10/09/2016 - NW of Bukoba Buildings Mapping

Edit Export

Description Instructions Contribute Activity Stats

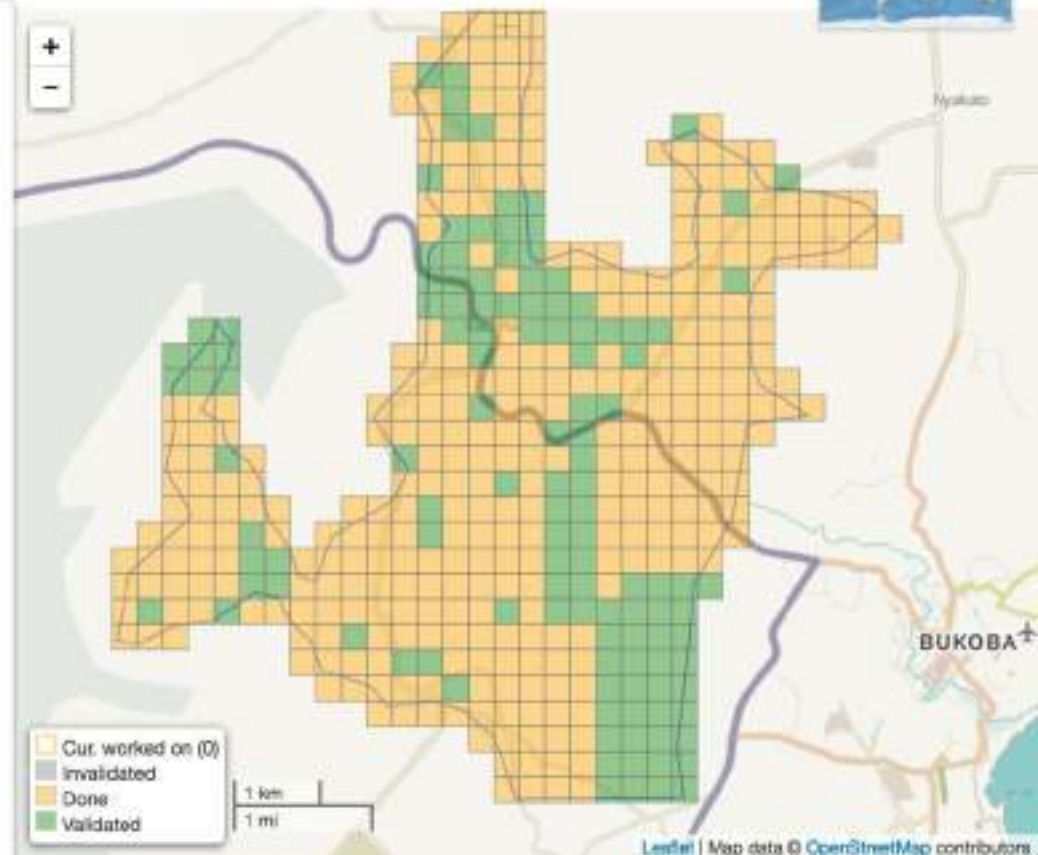
An earthquake of magnitude 5.9 has hit the Lake Victoria basin of Northern Tanzania and Southern Uganda on September 10th at 15:47 EAT.

(http://...)
consis...
instit...
reside...
struct...
Created...



Activation Protocol

Defining the HOT Disaster Mapping Program



OpenStreetMap iD Editor and Tutorials

The screenshot displays the OpenStreetMap iD Editor interface. At the top, the OpenStreetMap logo is on the left, and navigation links for 'Edit', 'History', and 'Export' are in the center. On the right, there are links for 'GPS Traces', 'User Diaries', 'Copyright', 'Help', and 'About', along with a user profile '23 bgirardot'. The main map area shows an aerial view of a building complex with orange lines indicating the current edit feature. A toolbar above the map includes buttons for 'Point', 'Line', 'Area', and 'Save', with a '1' indicating the number of features. The left sidebar is titled 'Edit feature' and contains a form for editing an 'Apartments' feature. The form includes fields for 'Name', 'Common name (if any)', 'Address' (with sub-fields for '123', 'Street', 'City', and 'Postcode'), and 'Levels' (with '2, 4, 6...' entered). An 'Add field:' dropdown is set to 'Elevation, Level, Note...'. At the bottom left, a link 'View on openstreetmap.org' is visible. The map area also shows a 'bing' logo, a scale bar for '250 ft', and a zoom level of '18.5'.

OpenStreetMap Edit History Export

GPS Traces User Diaries Copyright Help About 23 bgirardot

← Edit feature X

Point Line Area Save 1

Apartments i

Name i

Common name (if any) +

Address i

123 Street

City Postcode

Levels i

2, 4, 6...

Add field: Elevation, Level, Note...

[View on openstreetmap.org](#)

bing 250 ft 18.5

or on the ground

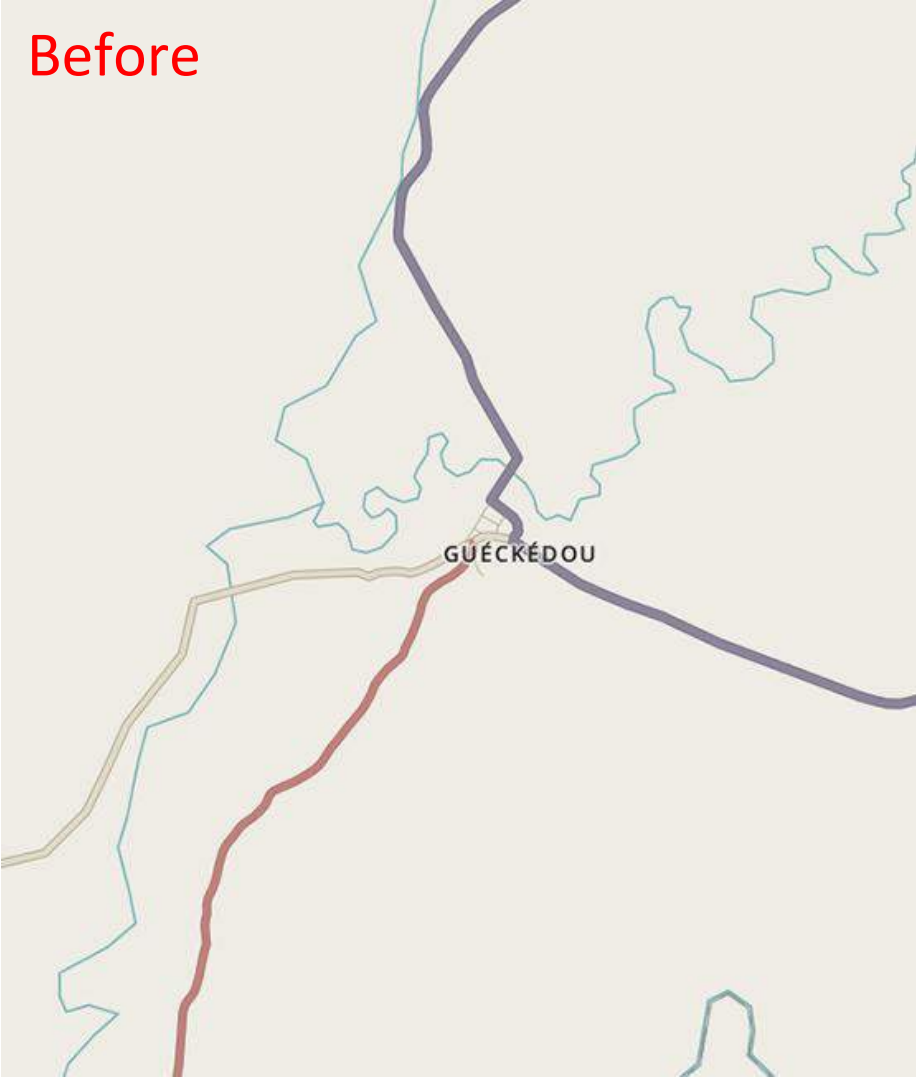


Incredible detail: vulnerability recorded at the micro-level



Gueckedou: 5 days, 244 volunteers, 90,000+ buildings

Before



After



Nepal





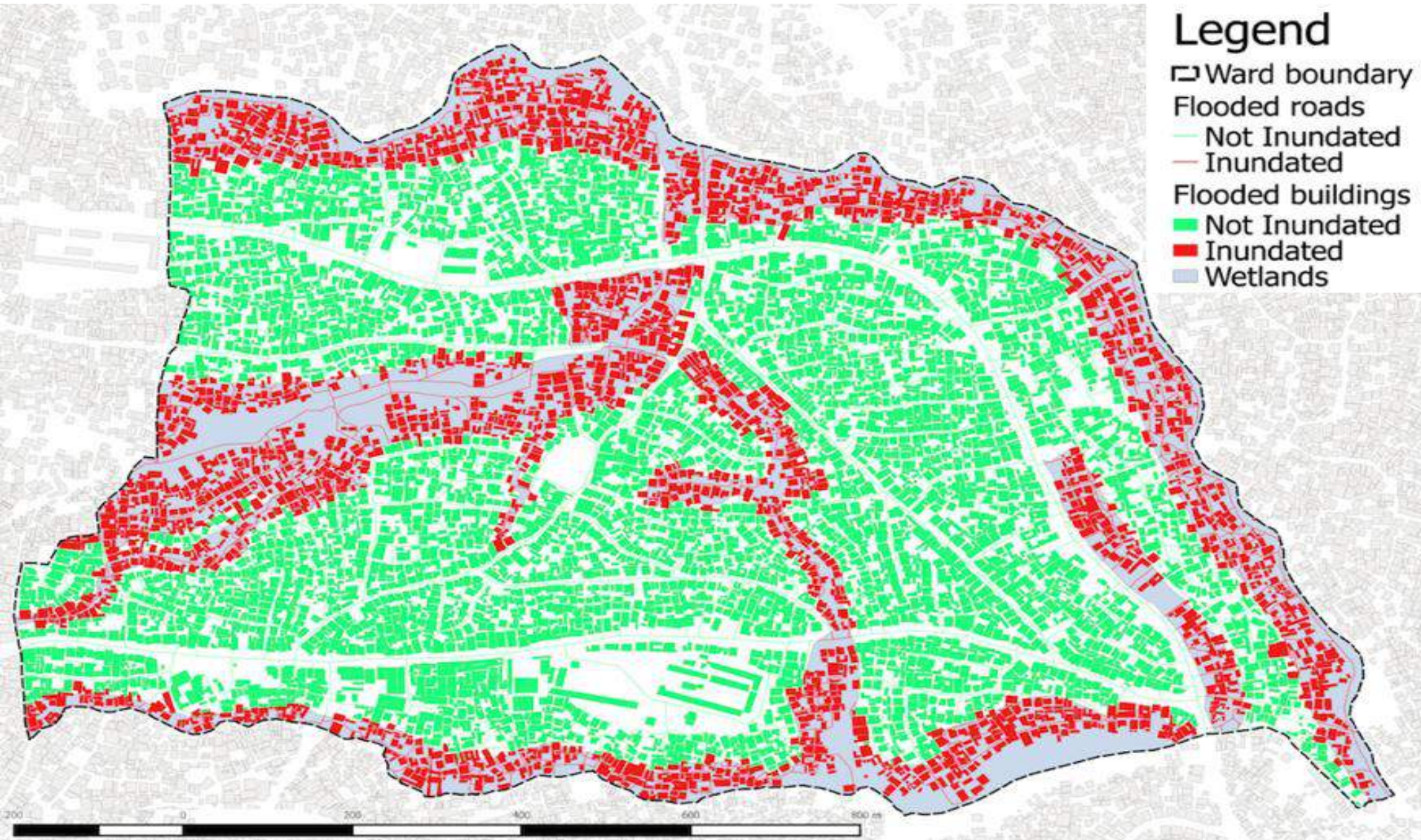
Photo courtesy British Red Cross

OSM in action: Portoviejo, Ecuador

Open Maps by the Community for the Community



Flood Inundation modeling – Dar es Salam



OpenAerialMap and Open Imagery Network



OpenAerialMap



GEO, IWG-SEM, UN GGIM...

HOT Joins the Group on Earth Observations



In July, HOT was voted in as a participating organization of the [Group on Earth Observations \(GEO\)](#). Forums like GEO that emphasize sharing of free and open Earth observation data are

Posted by:
Tyler Radford

Date posted:
Aug. 23, 2016



We're not only mapping after disaster -- let's make better maps available before disasters strike

HUGE need for

DATA

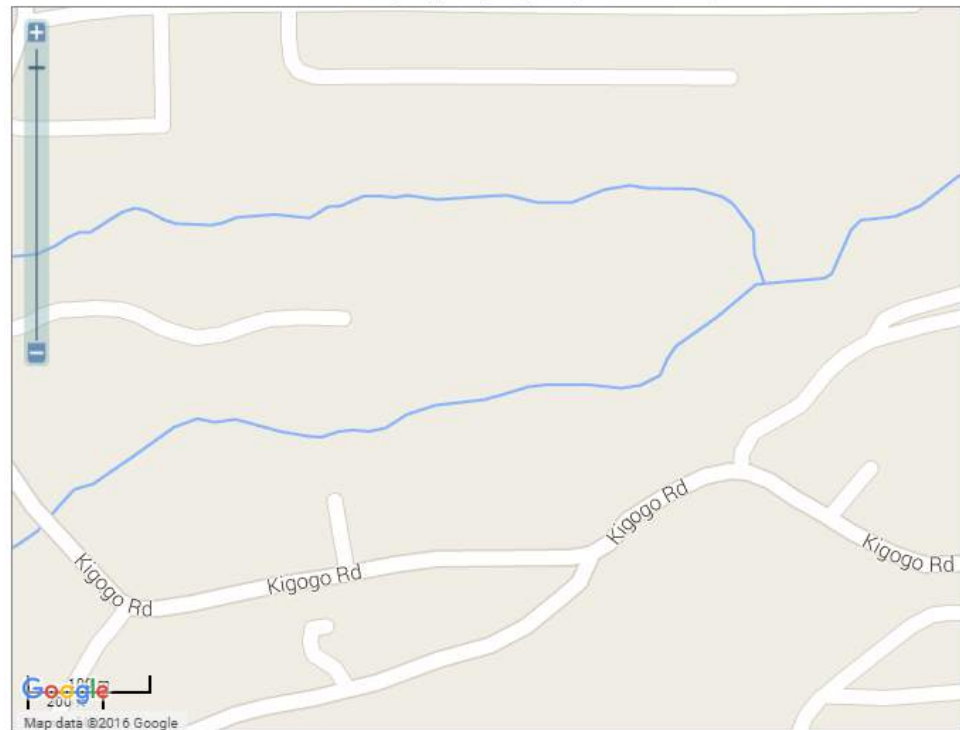
**Open
Geospatial**

“quality, accessible, timely and reliable disaggregated data will be needed to help with the measurement of progress and to ensure that no one is left behind”
(UN GA resolution 70/1, para. 48).

Crowdsourced, VGI, Open Geodata: big role to play in filling gaps at micro-level

Map Compare

Choose map type:



dar es salaam, tanzania

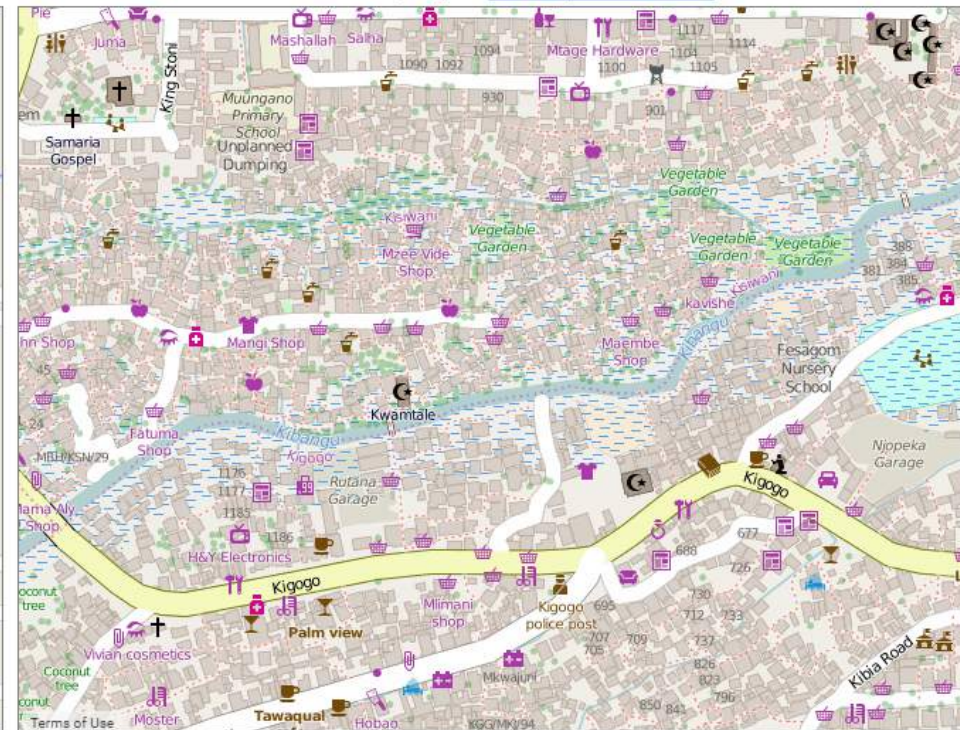
search

Help

GEOFABRIK tools

Switch tool...

Choose map type:



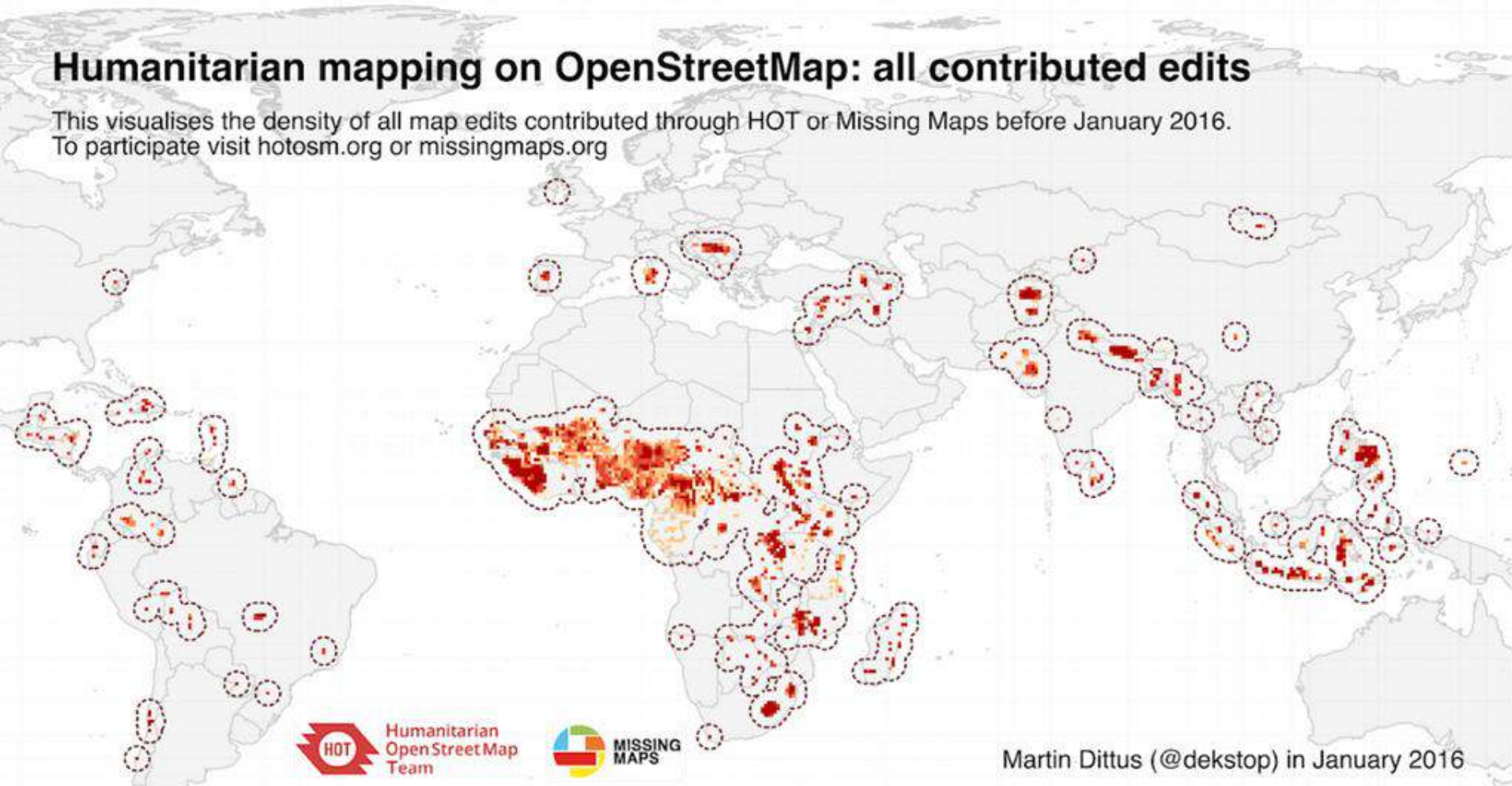
39.24340, -6.81760 zoom=17 number of maps: 1 2 3 4 6 8

All maps except Bing/Google/HERE based on OSM data © [OpenStreetMap](#) (License: ODbL 1.0), OSM Tiles licensed CC-BY-SA 2.0 - [help](#) - [contact](#) - [fullscreen](#)

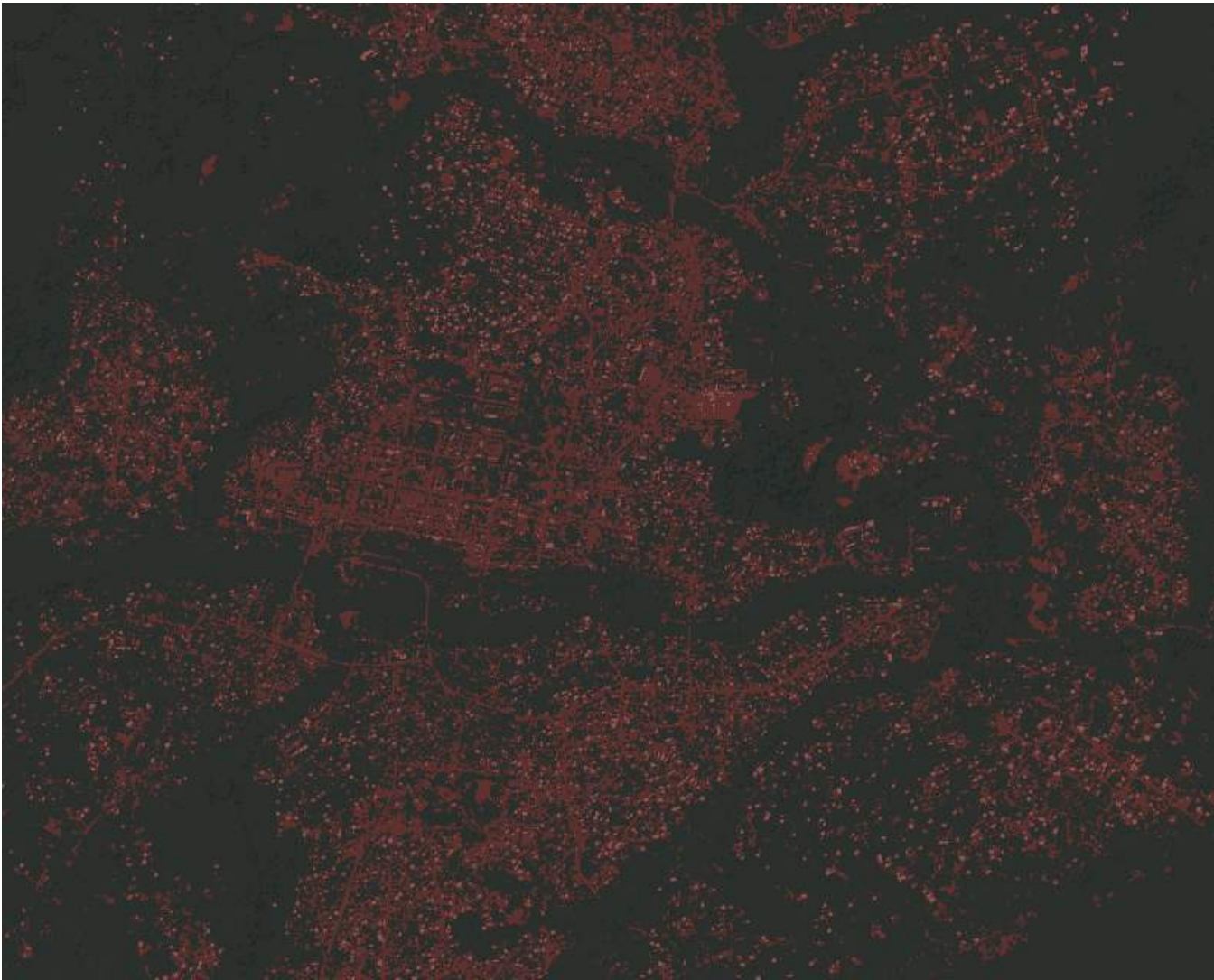
Thank you! info@hotosm.org @hotosm

Humanitarian mapping on OpenStreetMap: all contributed edits

This visualises the density of all map edits contributed through HOT or Missing Maps before January 2016.
To participate visit hotosm.org or missingmaps.org



Martin Dittus (@dekstop) in January 2016



Mamou, Guinea

29 hours

68 contributors

20,105 buildings



And not only disaster: health, education, transport, WASH



GLOBAL PARTNERSHIP
FOR SUSTAINABLE DEVELOPMENT DATA

