

August 1-3, Foundation University, Dumaguete



P I S T A N G M A P A

open data & software • free maps • community • talks • workshops



KAART



mapbox



Mapillary UΔV4GEO

Introduction to OpenStreetMap

Pista ng Mapa, Dumaguete City, Aug. 1-3

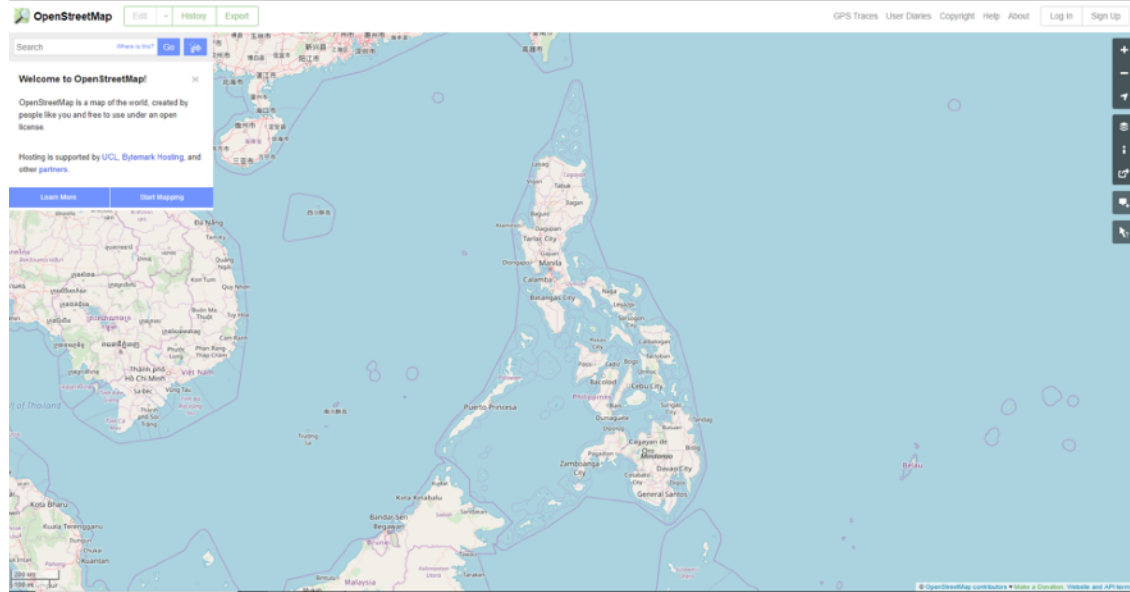


Arnalie Faye Vicario @arnalielsewhere

What is OpenStreetMap?

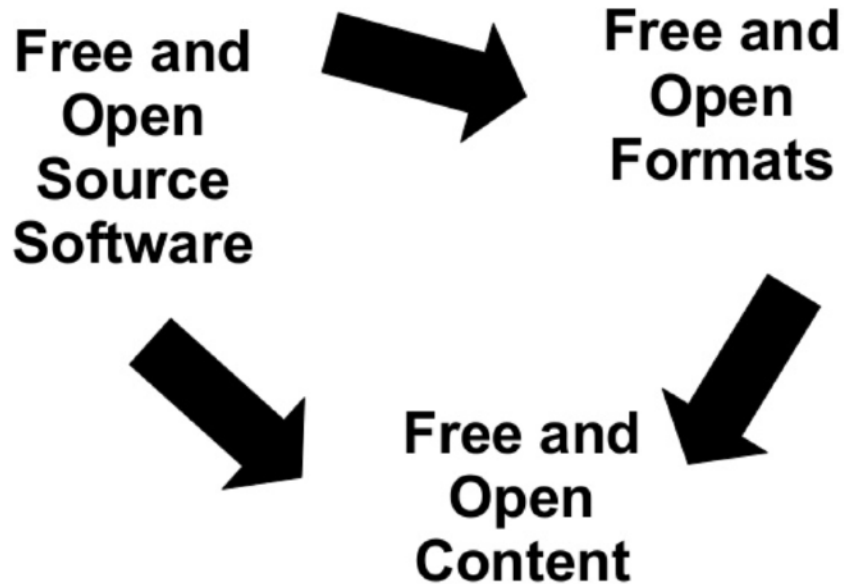
- *Crowd-sourced/ community* project to map the whole world!

“Wikipedia
of maps”



What is OpenStreetMap?

But unlike any other crowd-sourced mapping projects, OpenStreetMap is free and open!



OpenStreetMap - License

OSM is licensed under the Open Database License (ODbL) by the OSM Foundation (OSMF)

YOU ARE FREE

To Share: To copy, distribute and use the data

To Create: To produce works from the data

To Adapt: To modify, transform and build
the data

upon



OpenStreetMap - License

AS LONG AS YOU

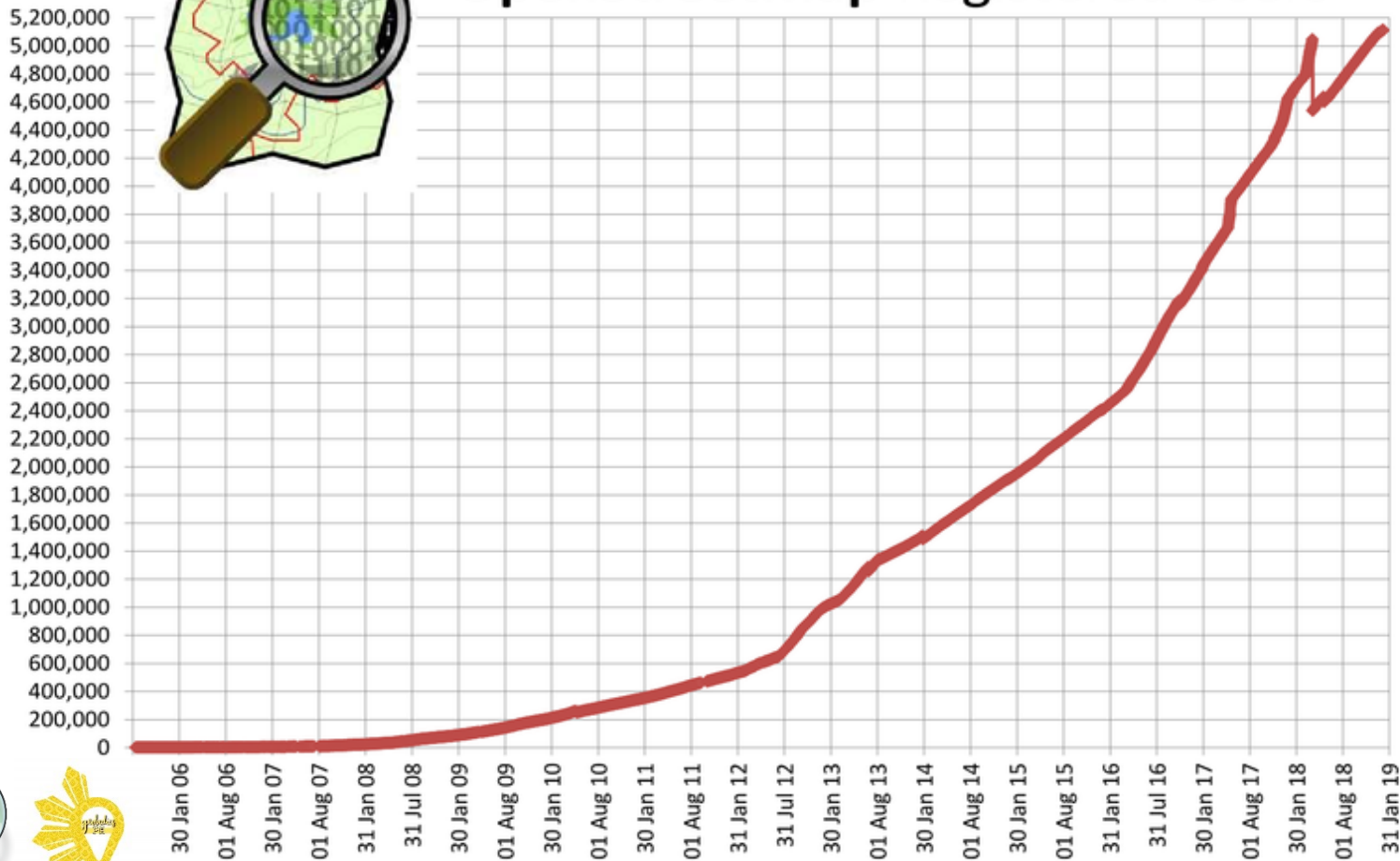
Attribute: You must attribute public use of the data. You must keep intact any notices on the original data.

Share-Alike: If you probably use any adapted version from the data, you must also offer that adapted data under the ODbL.

Keep open.



OpenStreetMap Registered Users



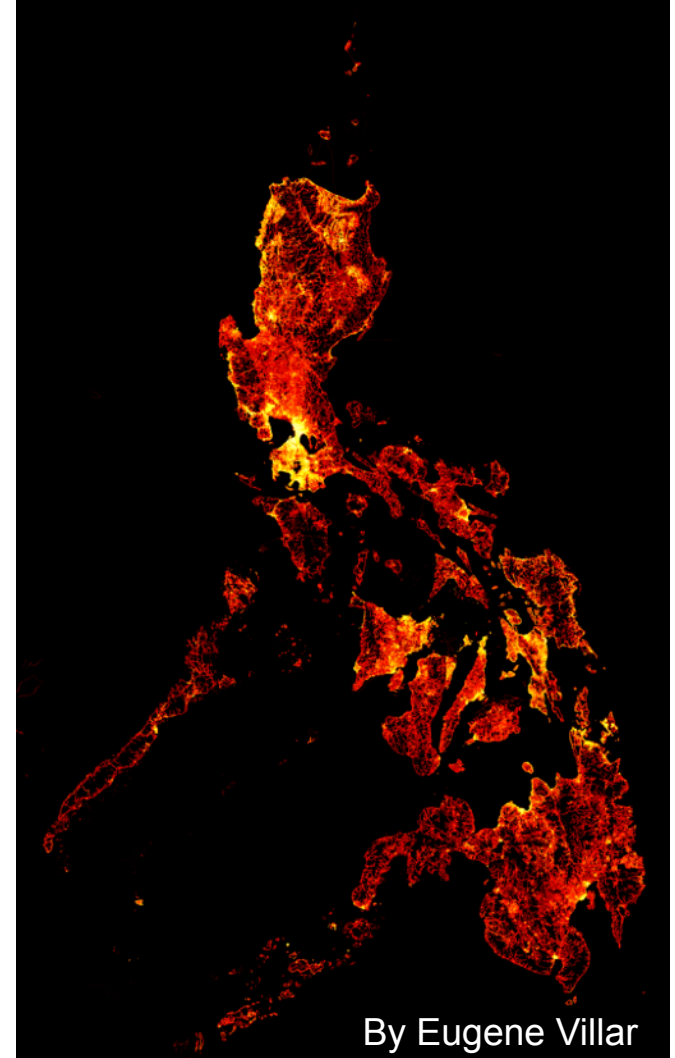
OpenStreetMap stats (July 30, 2019)

Number of users	5,567,753
Number of uploaded GPS points	7,414,870,420
Number of nodes	5,350,564,153
Number of ways	593,966,407
Number of relations	6,942,884

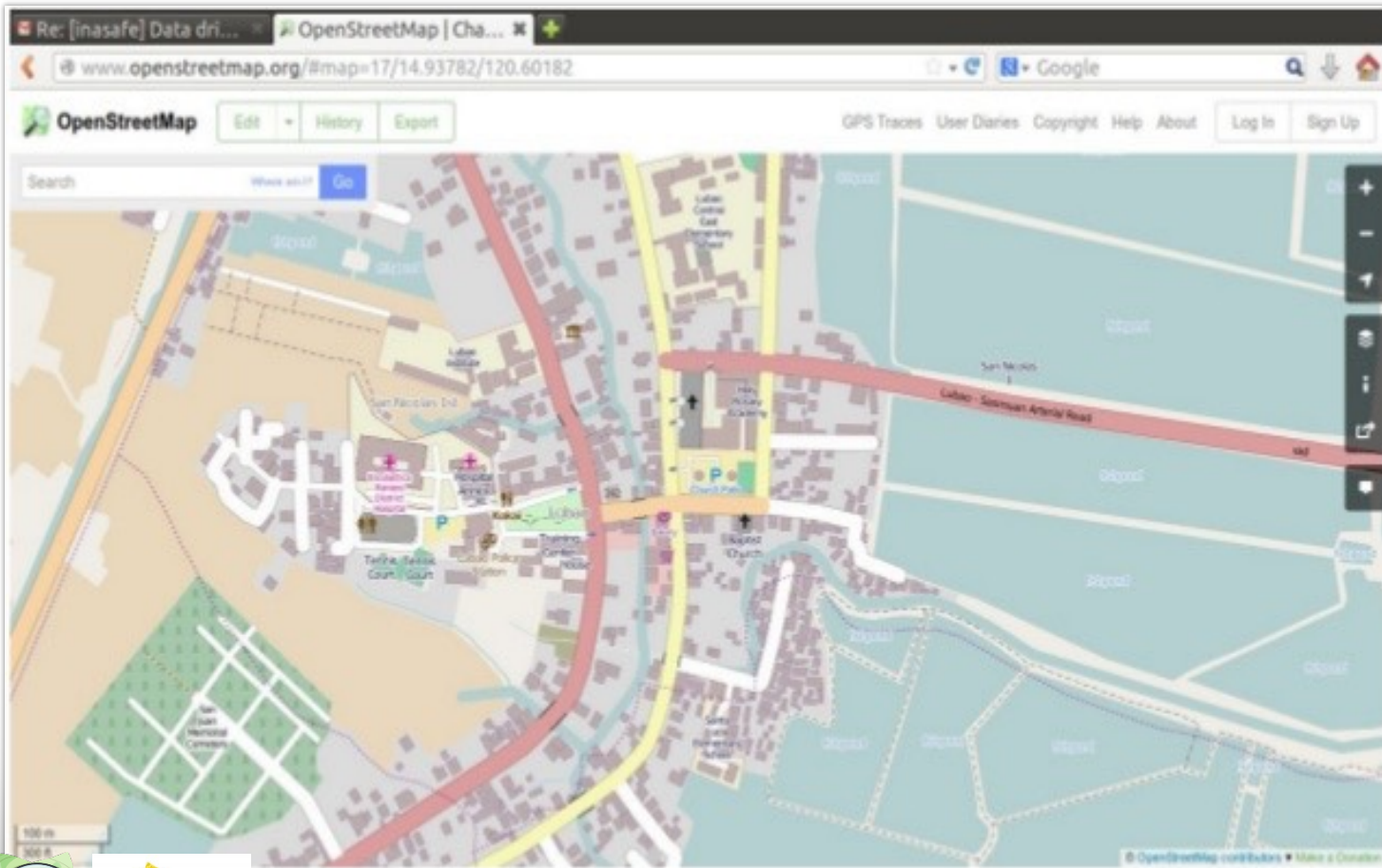


Philippine OpenStreetMap Node Density (as of January 2019)

https://wiki.openstreetmap.org/wiki/Philippines/Node_density_maps



By Eugene Villar



Lubao, Pampanga LGU employees



Inbox - emmanuel.sa... OpenStreetMap | Rel...
 www.openstreetmap.org/relation/2524687
 OpenStreetMap Edit History Export
 GPS Traces User Diaries Copyright Help About Log In Sign Up

Search

Relation: St John the Baptist Parish (2524687)
 [Manta] Fix parish boundary relations
 Edited 6 months ago by sear
 Version #4 - Changedet #16356664

Tags

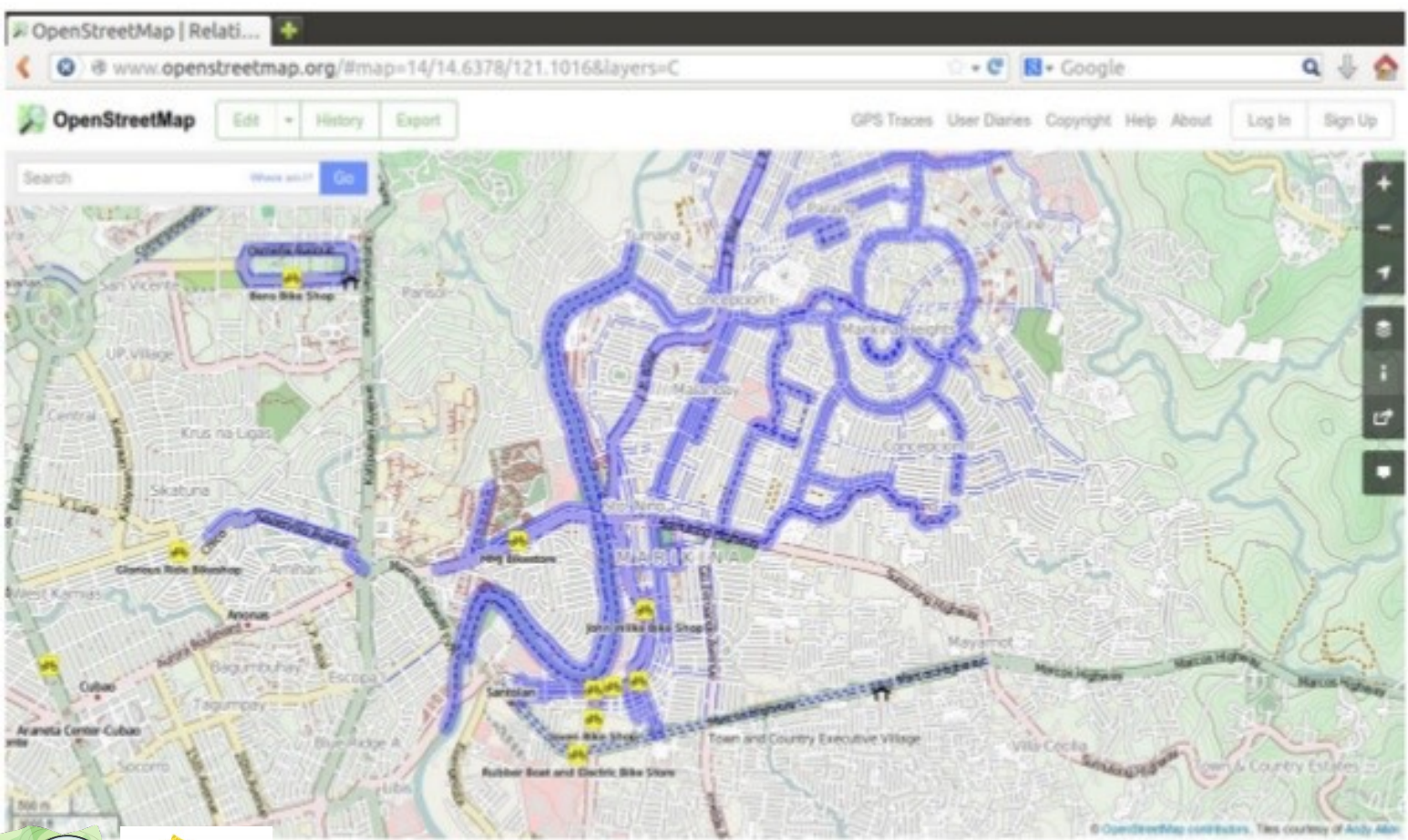
boundary	religious
denomination	roman_catholic
level	10
name	St John the Baptist Parish
religion	christian
type	boundary

Members

- Way Mirror (Seals of the Black Nazarene) (1794036335) as seat
- Way Paeng River (35154335) as outer
- Way 187486777 as outer

Parish Volunteers





Bike Commuter



How can we contribute to OpenStreetMap?



Contribute using **your personal knowledge!**





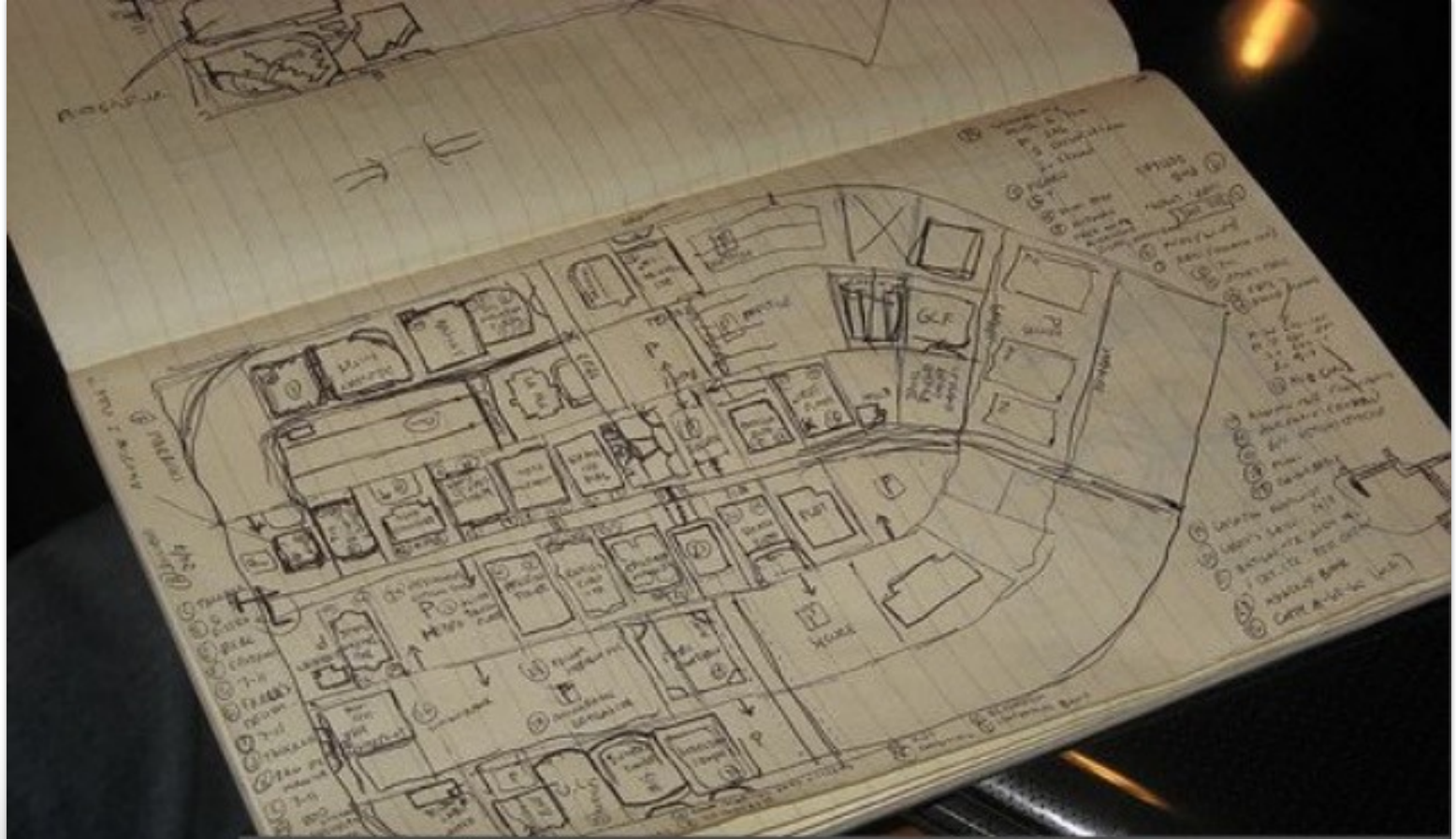
Go out and survey



Field Papers

<http://www.fieldpapers.org/atlas.php?id=tb23676v/A1>





Write down notes



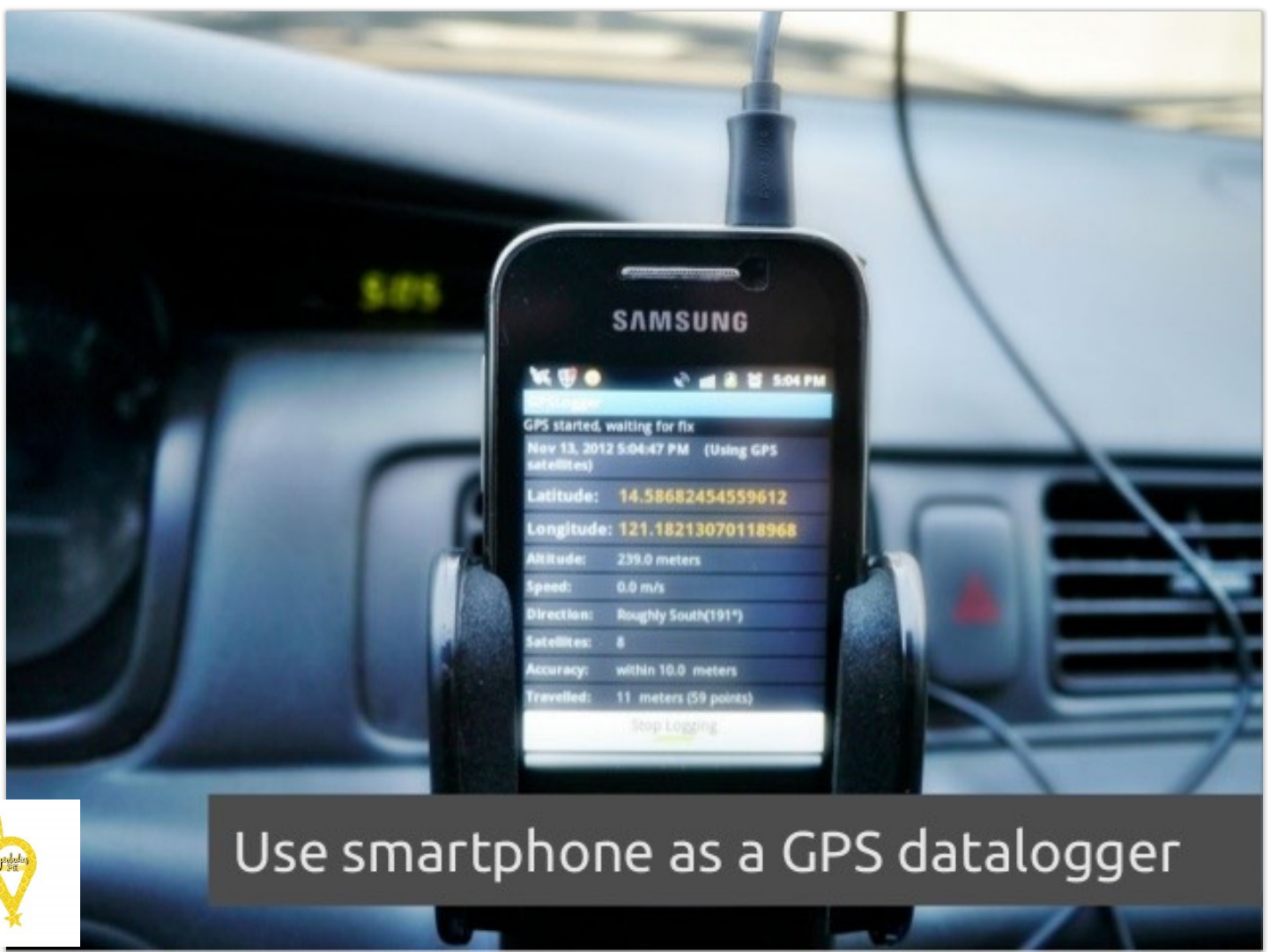


Take photos



Save tracks & waypoints on GPS unit





Use smartphone as a GPS datalogger





Navigate and collect data using a laptop



How helpful is OpenStreetMap?





UPD-Geography OSM-PH Yolanda Mapathon, Nov 15
Photo by David Garcia

OpenStreetMap Activities for Typhoon Haiyan (2013)

General Information

Number of OSM Contributors: 1125
Number of Map Changes: 2569613
(Total number of Changesets: 21444)
(Number of visualized Changesets with >= 150 Map Changes: 4025)

If you want to help?

Go to the OpenStreetMap Wiki page
[Typhoon Haiyan \(2013\)](#)

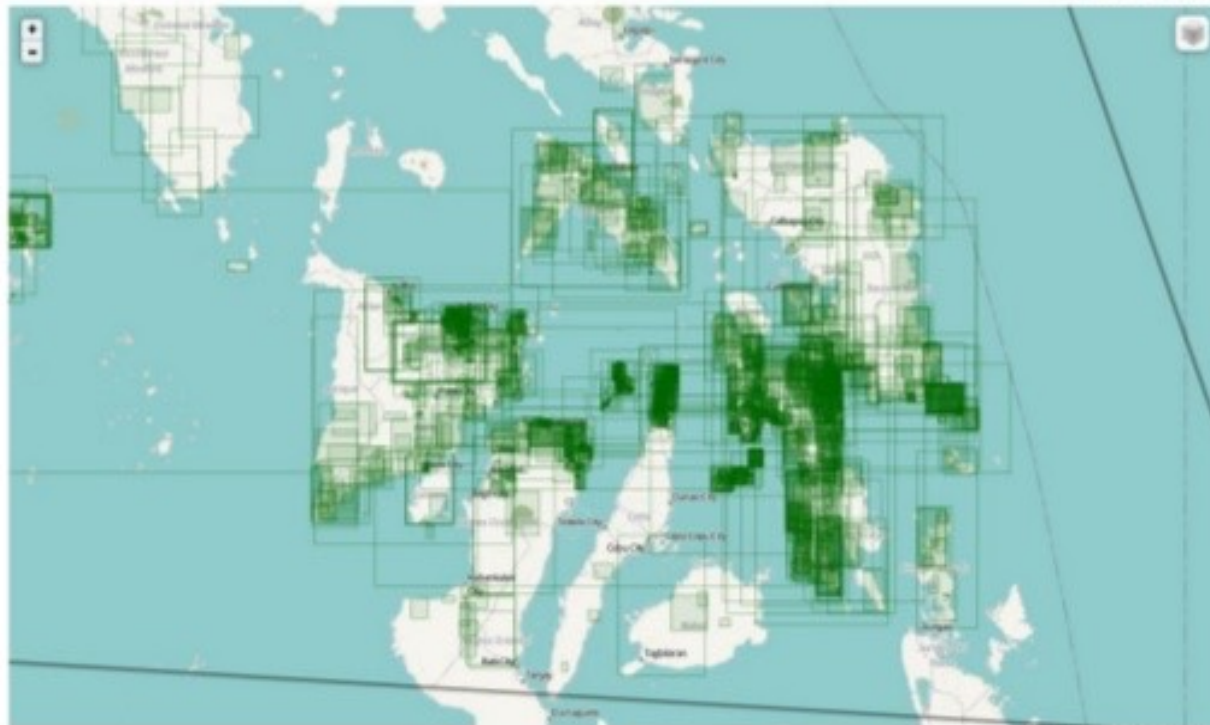
Additional information can be found at
[Humanitarian OSM Team \(HOT\)](#)
[Mapping List](#)

Who helped?

[Blog Post](#) about this website

Legend

- Analysis Extent
- OSM Changesets



Last updated: 2013-11-07 23:58:47 UTC

<http://resultmaps.neis-one.org/osm-typhoon-haiyan-2013>



November 2013



By Eugene Villar



22 days

~1,500 volunteers

82 countries

4.2 millions of changes

448,797 buildings

34,713 roads

7,857 residential areas

4,060 rivers

(as of 2013-11-30)





American Red Cross

@RedCross

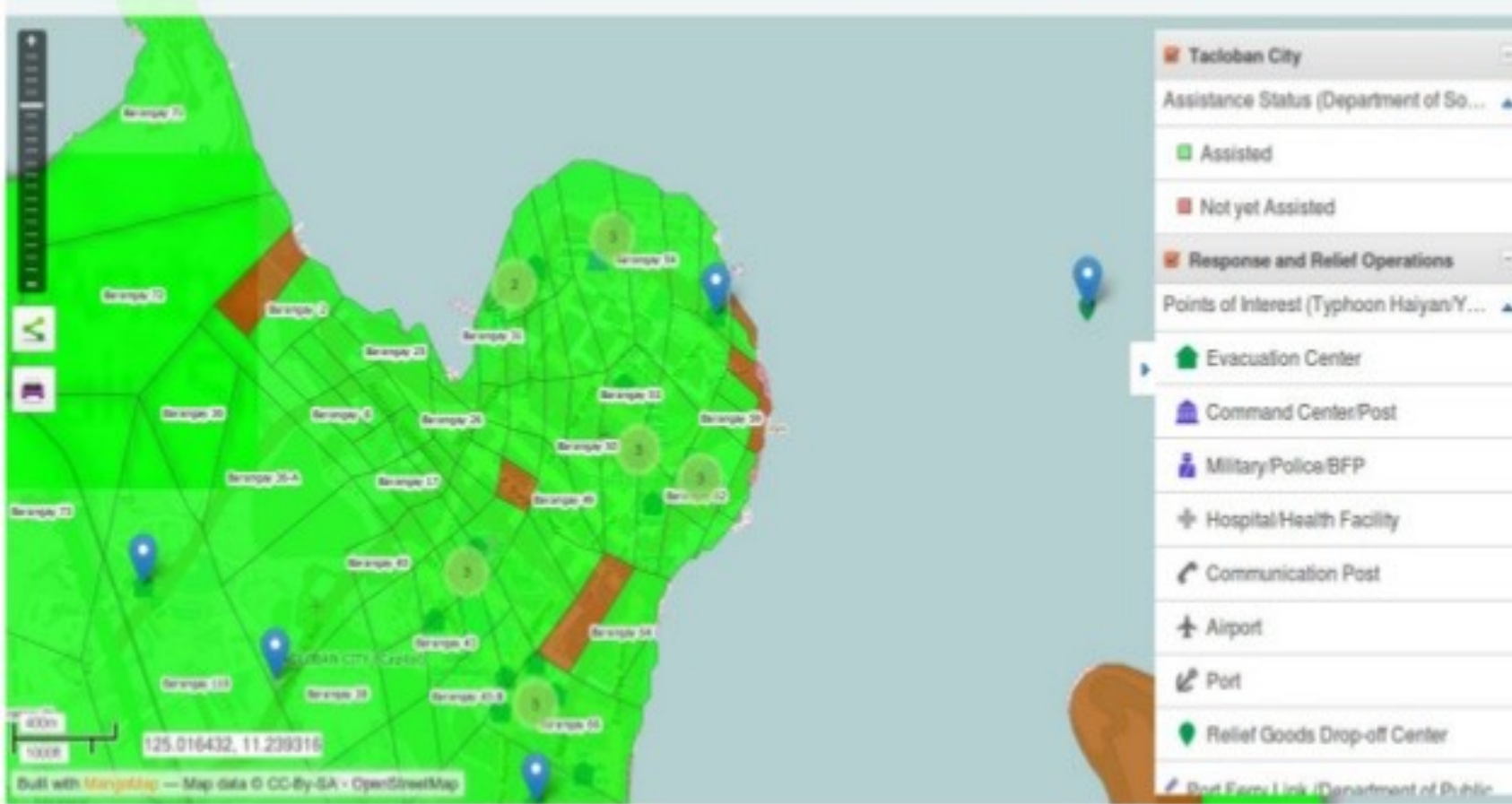
Follow



We're sending 5 more specialists to the **#Philippines**. They'll assess dmg w/help of crowdsourced maps **@OpenStreetMap**



12:45 PM - 14 Nov 2013



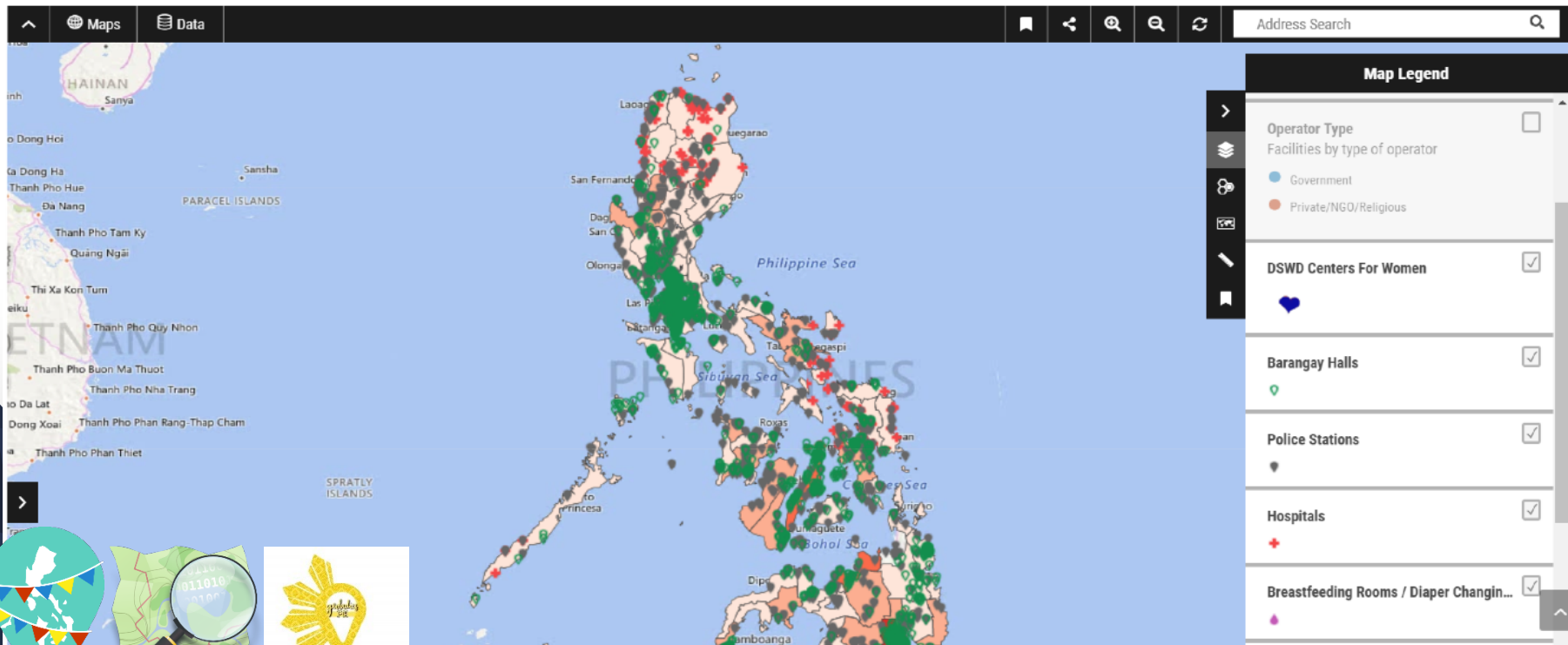
<http://disaster.dswd.gov.ph/maps.php>

<https://maps.dswd.gov.ph/special-maps/vawmapph/>



Violence Against Women and their Children (VAWC) Resources Map

Map showing VAWC facilities, as well as Social Welfare and Development Agencies, Police Stations, Hospitals, Barangay Halls, Daycare Centers and Breastfeeding and diaper changing stations.



UP NOAH uses OSM data for WebSAFE

In the event of a flood in **Tacloban City, Leyte**, how many buildings might be flooded?

Summary | **Building Types** | Check Listo | Other Info

High Medium Low

30,416
Total Buildings

10,124
Buildings Affected

7,803
2,303
18

of bldgs.

Building Type	# of bldgs.
Wood	~3,000
Bamboo	~500
Makeshift	~200
Others	~18

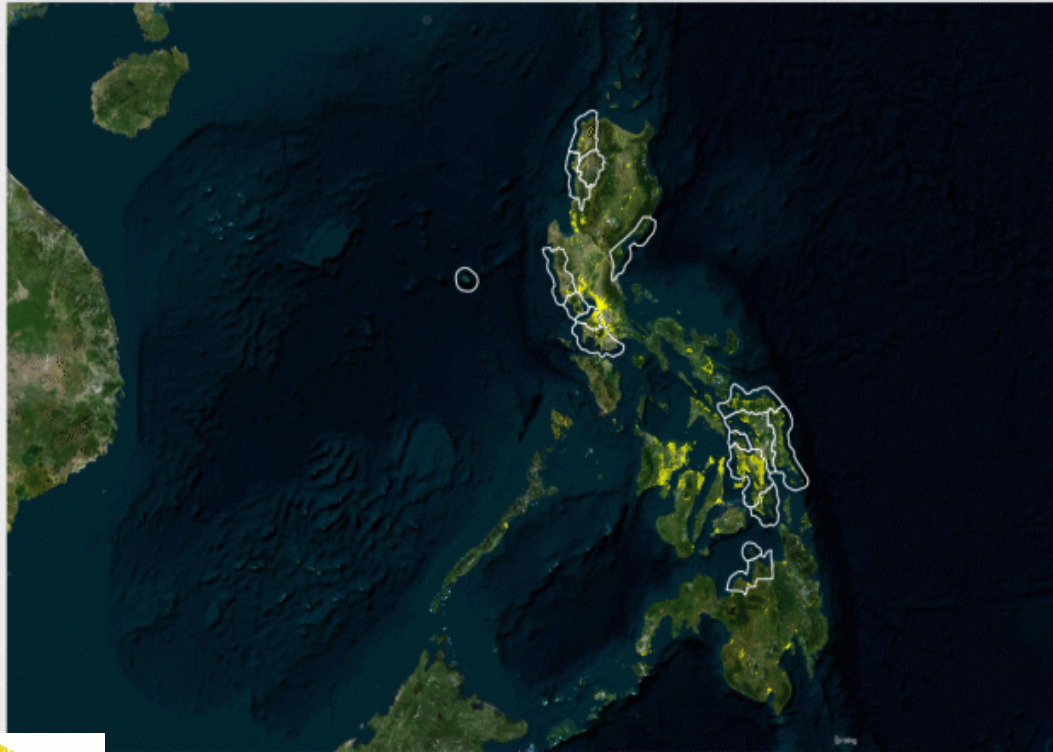
View PDF | Close

WebSAFE, an impact assessment tool based on OpenStreetMap (OSM) data.

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PHILIPPINES



BEFORE - MARCH 14, 2016 - 534,676 STRUCTURES



OSM MAPPING PROGRESS

CAVITE BUILDING FOOTPRINT MAPPING
HAS BEEN COMPLETED!

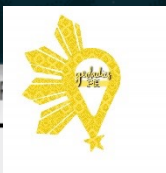


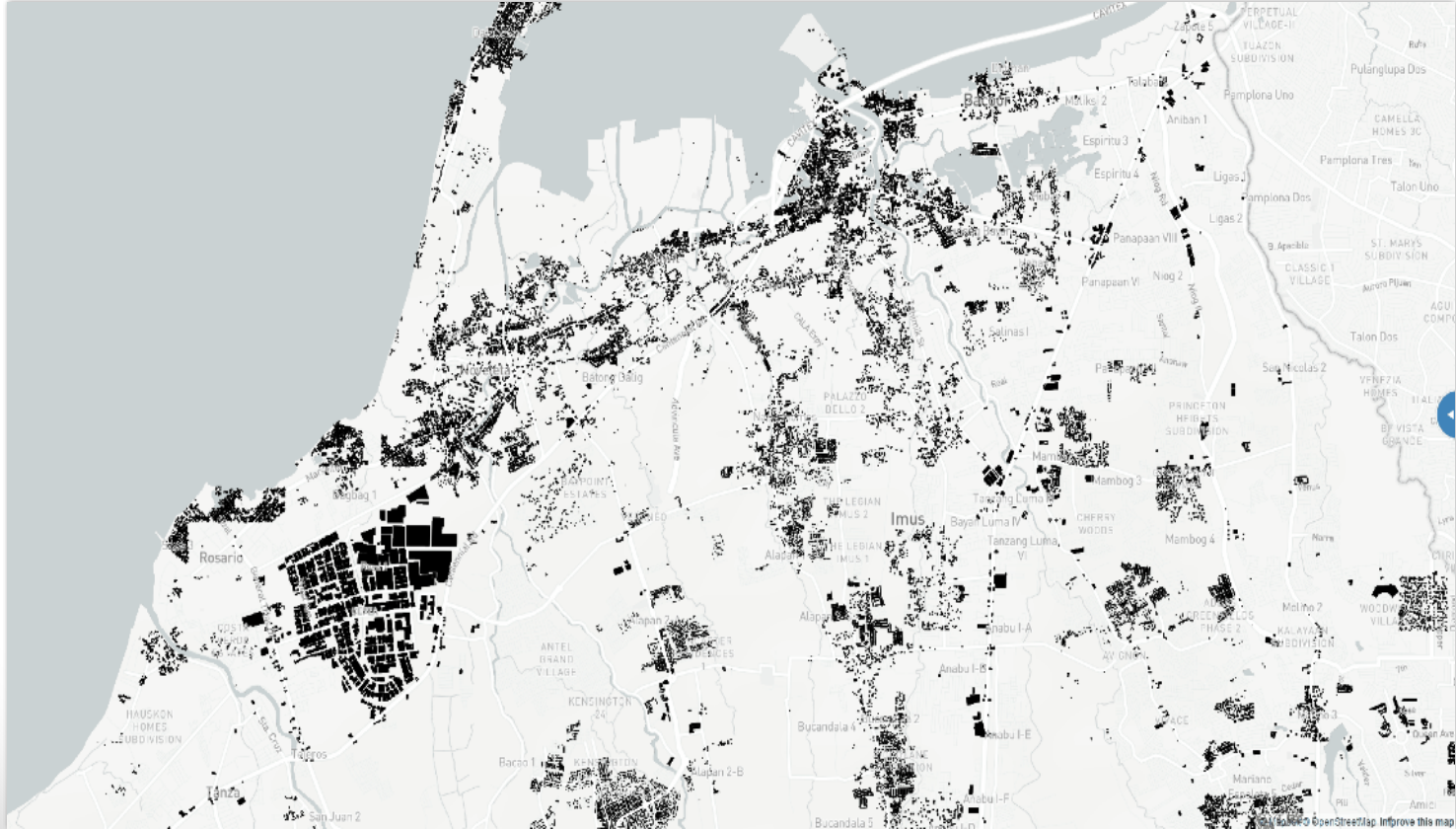
BEFORE - MARCH 14

IMAGERY BY BING



Nationwide Operational
Assessment of Hazards





Total building footprints mapped:

From **110,506** to **631,825**



OpenStreetMap Philippines (OSM PH) a.k.a. OSM LoCos



Conference: State of the Map Asia (October 2016)

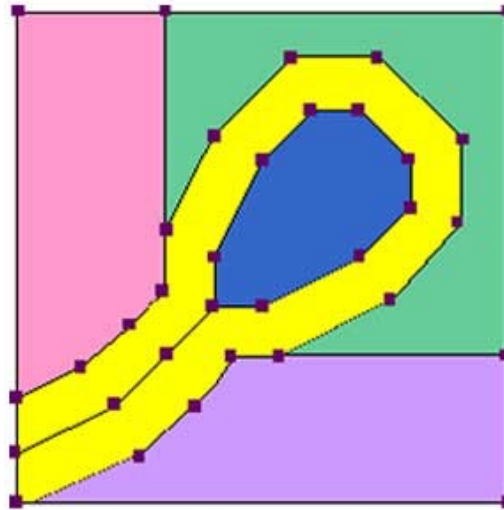


OSM Elements and Tags

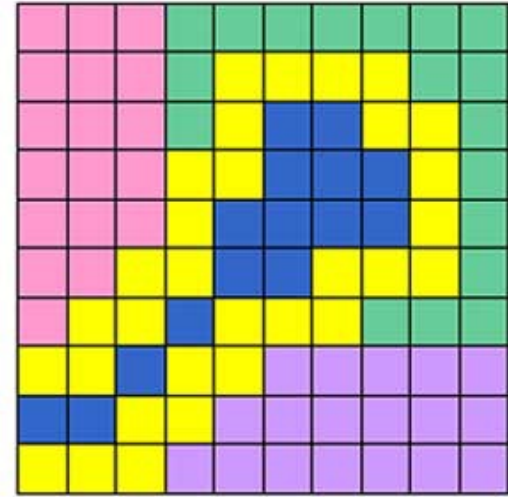


DATA MODELS

- Used to represent the real world
- GIS Data Models: Vector and Raster



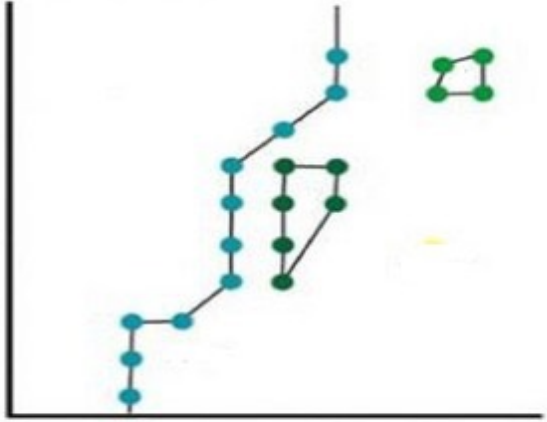
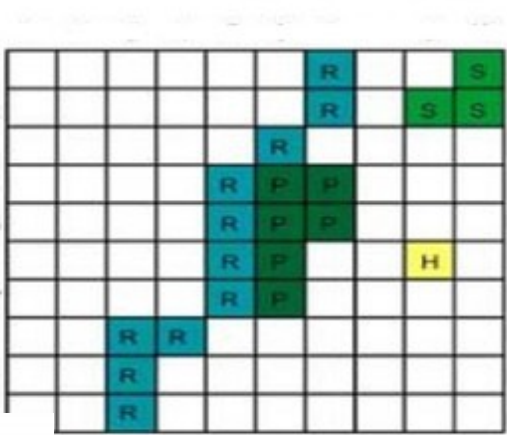
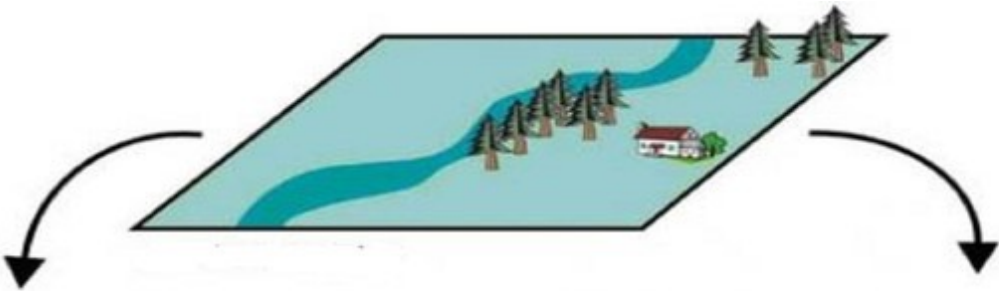
Vector



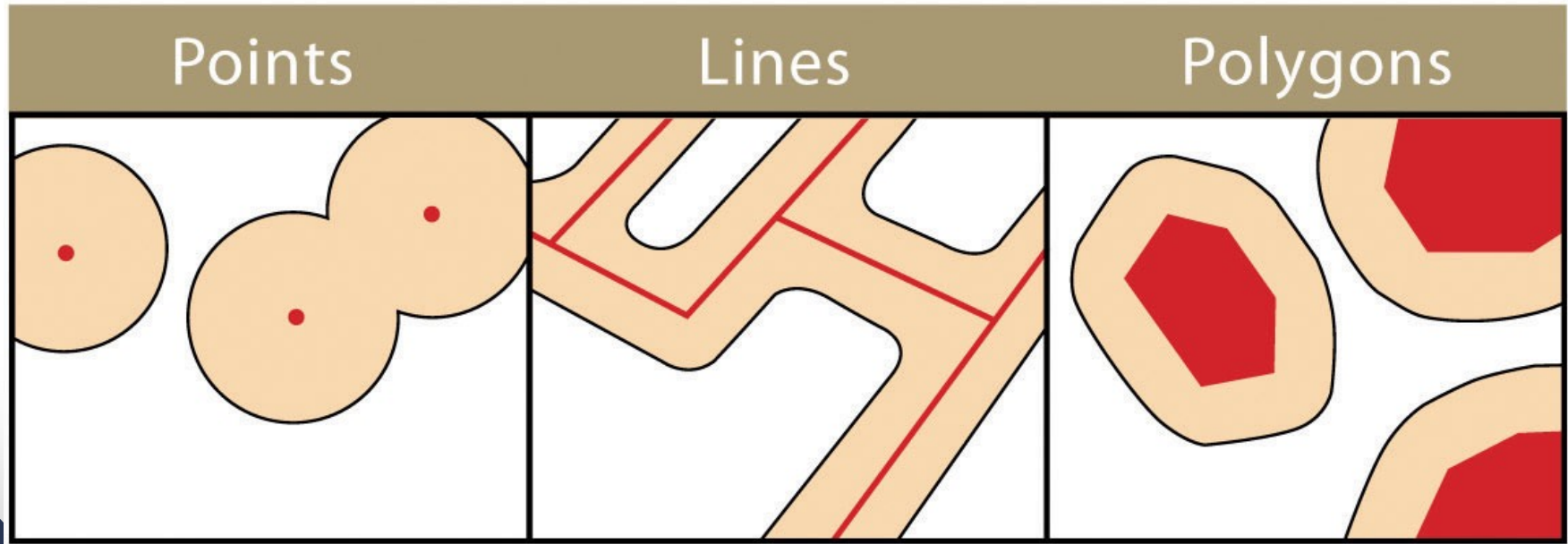
Raster



DATA MODELS



VECTOR DATA MODELS



OSM objects are combination of Elements and Tags



ELEMENTS

- **NODE** is a point in space
- **WAY** represents linear features
- line is a way that is open, while polygon is a way that is closed
- **RELATIONS** multi-purpose data structure that documents a relationship between two or more data



ELEMENTS

OpenStreetMap Translator

2D Map Feature Terminology

OSM



Point

Node



Line

Way (open)



Polygon

Way (closed)



TAGS

- **KEY** category of feature
- **VALUE** details the specific form of the key

For example:

building = *yes*

building = *school*

landuse = *farmland*

highway = *primary*

highway = *unclassified*

landuse = *residential*



Get connected! OSM PH Channels

Mailing list:

<https://lists.openstreetmap.org/listinfo/talk-ph>

Facebook Page:

<https://fb.com/OSMph>

Facebook Group:

<https://fb.com/groups/osmph>

Telegram:

<https://t.me/osmph>



To know more about mapping conventions for the Philippines, see:

https://wiki.openstreetmap.org/wiki/Philippines/Mapping_conventions



References

- ◆ Coast, Deffner & Weait, 2015. Introduction to OSM
- ◆ UP NOAH, 2019. OpenStreetMap for Disaster Risk Reduction
- ◆ Villar, 2019. Introduction to OpenStreetMap
- ◆ <https://wiki.openstreetmap.org/wiki/Elements>
- ◆ <https://wiki.openstreetmap.org/wiki/Tagging>



#GeoLadies Invitations

- When Woman Map Workshop
1:30 - 3:00 PM, IT Room
- GeoLadiesPH Plenary Session
3:20 - 4:30 PM, Sofia Hall



#GeoLadies Invitations: Talks

- Day 1
 - Introduction Workshop to OSM
1:00 - 2:30 PM CS Lab 2
 - Human Experience Design for Maps
3:00 - 4:30 PM CS Lab 2
- Day 2
 - “DIY” Imagery Collection for Mapping
10:30 AM - 12 NN CS Lab 2



Thank you!

Up next...

OSM id Editor + mapathon



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KAART



mapbox



Mapillary UΔV4GEO