

OpenStreetMap Data for Navigation Guidance and Trekking



State of the Map Asia 2016
UP Diliman, Philippines
2nd October 2016

What is Schadow1 Expeditions

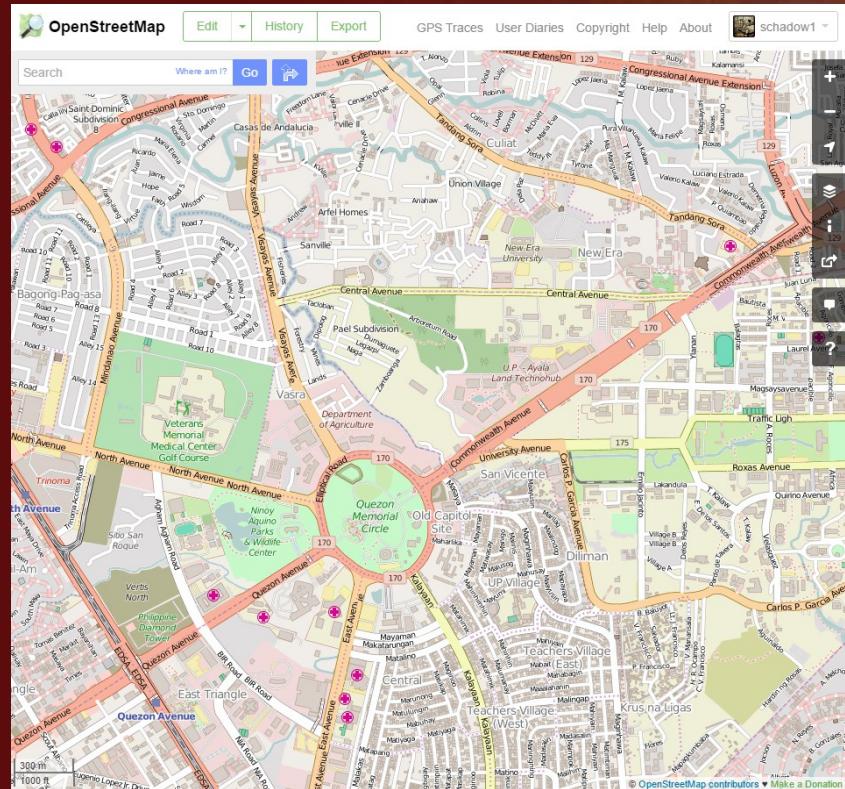
- A travel and mapping advocacy resource for the Philippines
- Started in 2012 to document experiences in the Philippines while mapping communities, trails, and areas of interest.
- Mapping advocacy started back in 2005 and contributing mapping data to Google Maps, Roadguide Philippines, OpenStreetMap, Waze

What is Schadow1 Expeditions

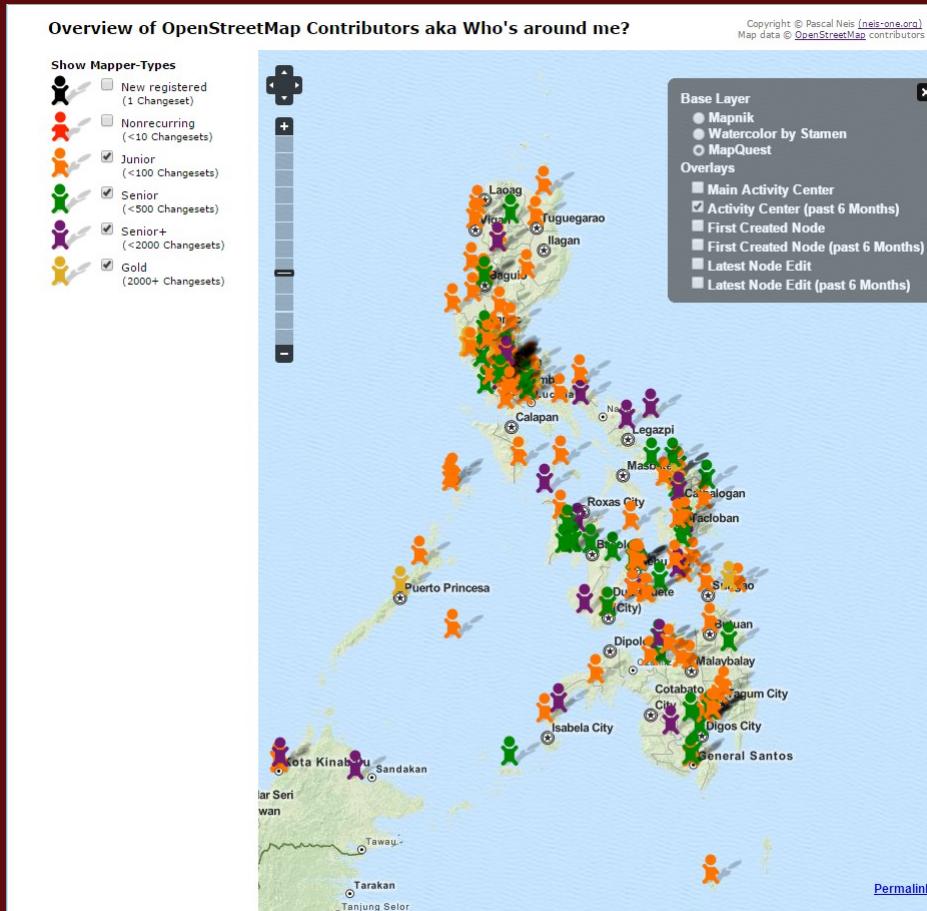
- In 2011, we have chosen OpenStreetMap as the choice for contributing our mapping data for being open sourced, crowdsourced and free.
- In 2009, OSM data has been extracted and converted to Garmin offline maps.
- In 2013, Schadow1 Expeditions has taken the task and improved the extraction, conversion and compilation.
- OSM-based Garmin map of the Philippines released in a weekly-basis.

Why OpenStreetMap

- Crowd sourced
- Open source
- Forever Free
- Real-time updates



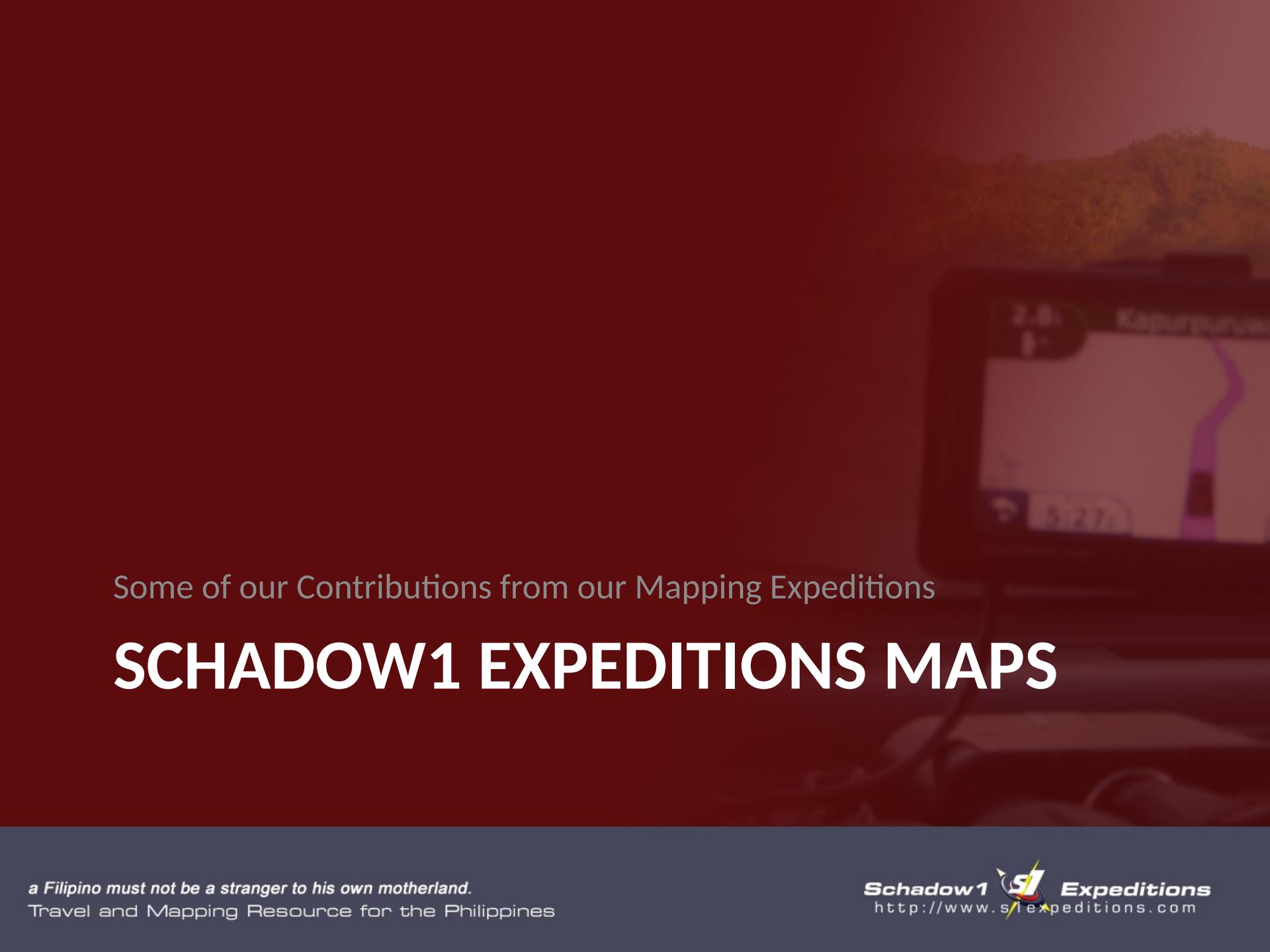
- Over 1000 contributors nationwide
- About 30 regular contributors nationwide
- Contributors came from various professions with a goal of helping his countrymen through mapping data.
- With these contributors, Philippine data has tremendously increased over a span of a few years.



Latest update of contributors over the last 6 months based in the Philippines.

[http://resultmaps.neis-one.org/oooc?
zoom=6&lat=12.17029&lon=123.
04829&layers=00BFFFFFFT](http://resultmaps.neis-one.org/oooc?zoom=6&lat=12.17029&lon=123.04829&layers=00BFFFFFFT)

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Travel and Mapping Resource for the Philippines



Some of our Contributions from our Mapping Expeditions

SCHADOW1 EXPEDITIONS MAPS

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Travel and Mapping Resource for the Philippines

Apo-Talomo Traverse

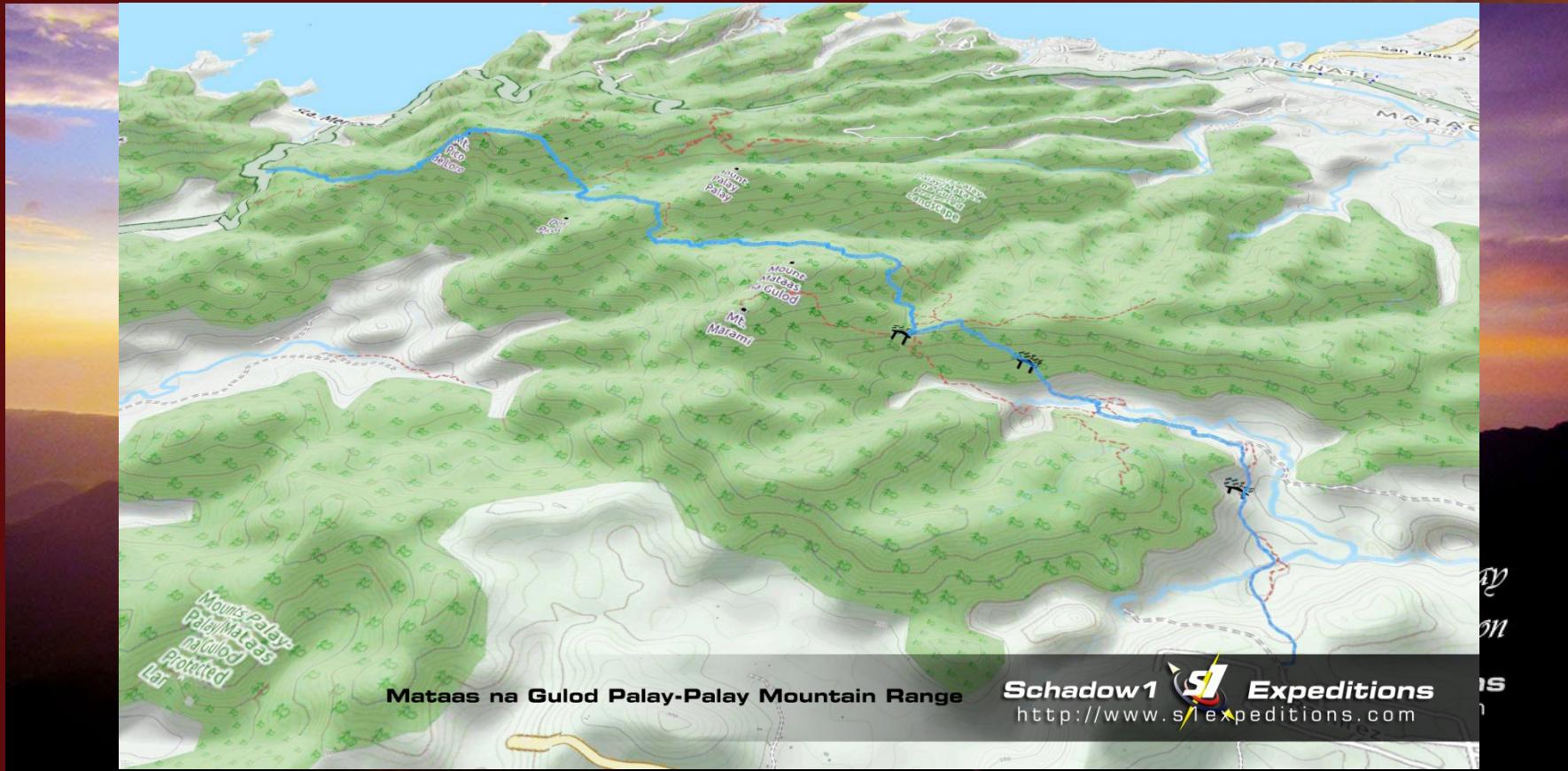


Camiguin



Schadow1 Expeditions | <http://schadow1.cxsmedia.com>
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Palay-Palay Mataas na Gulod Range



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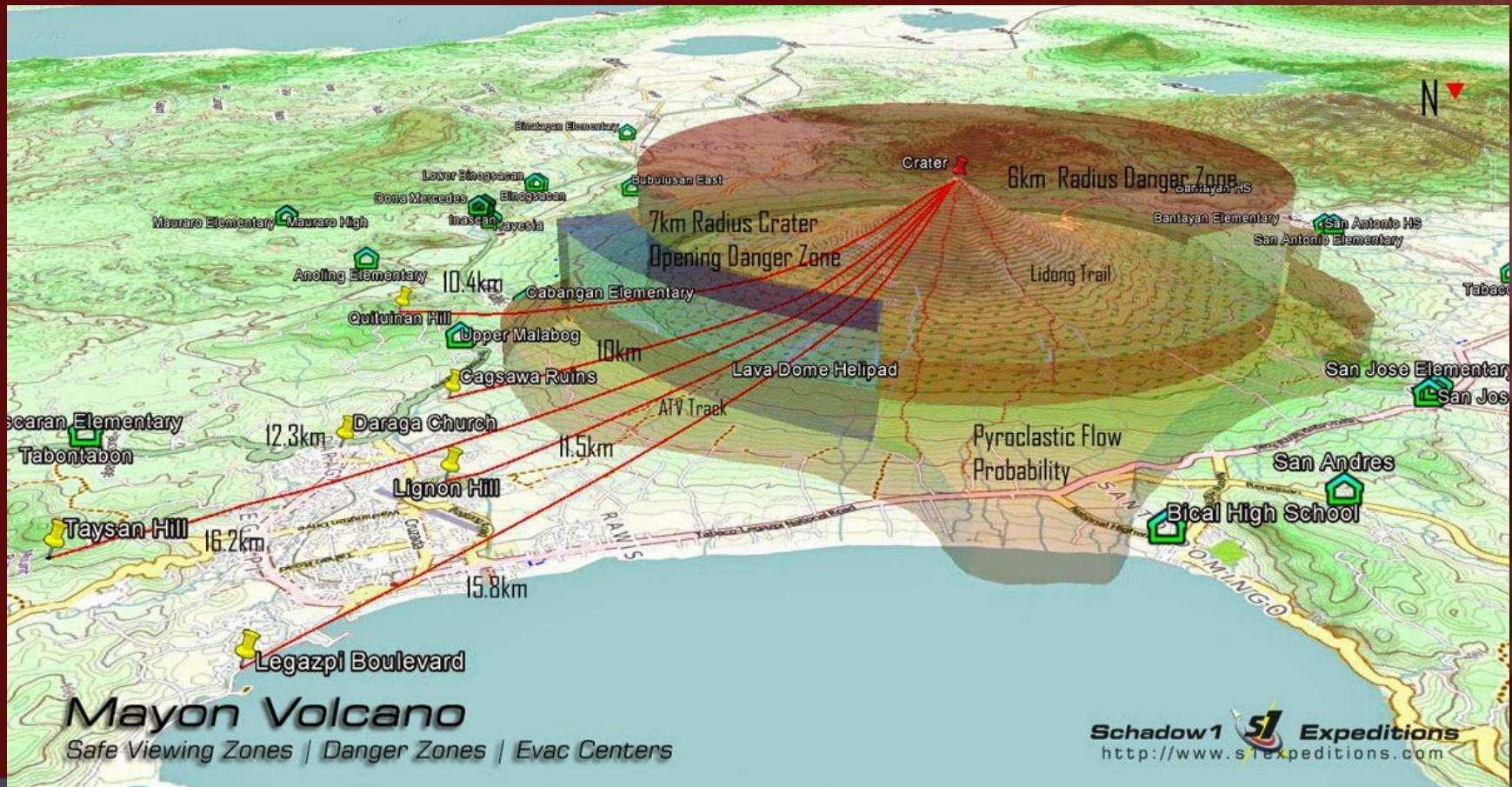
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Jomalig Island



Our Contributions



Our Contributions



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How big is the OpenStreetMap Data

- Number of Contributors: 3,109,548
- Number of GPS points: 5,385,792,304
- Number of Nodes: 3,552,314,794
- Number of ways: 370,535,201
- Number of relations: 4,519,810

As of October 2, 2016

Products

- GPS Map
- SRTM 1-arc second elevation contour map

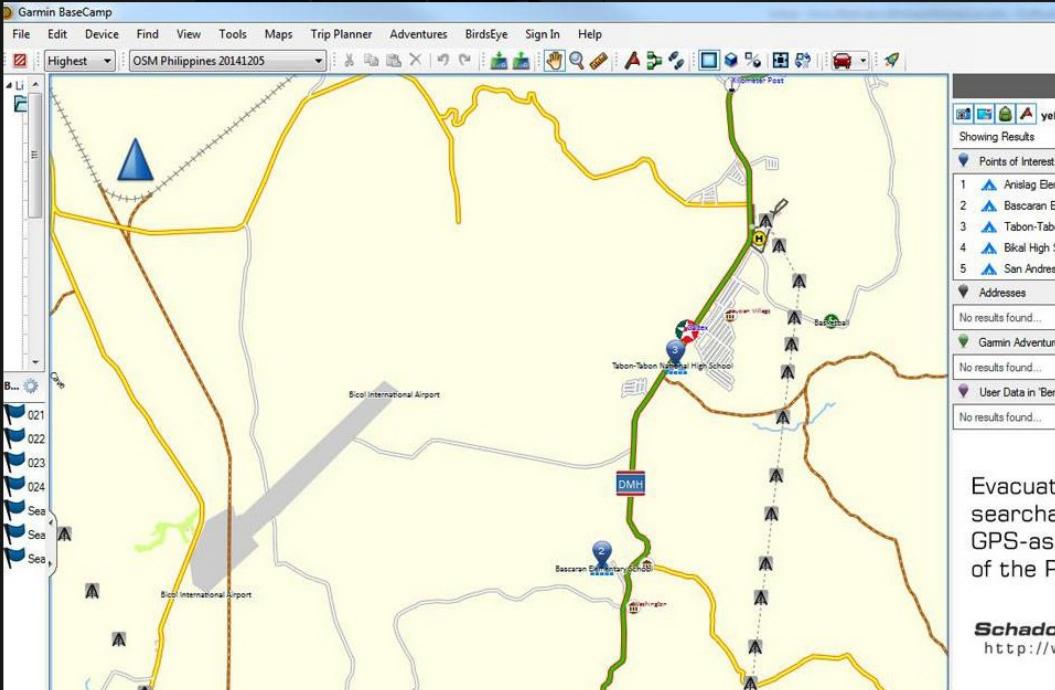


Routable GPS Map of the Philippines

- Frequently updated (about once a week)
- Established mountain trails are easily distinguishable
- More frequent during humanitarian activations.
- Evacuation Centers are shown during humanitarian activation version of the maps.
- Searchable places of interests (POIs) with telephone numbers if available which can be used to call the establishments if your GPS is connected through Bluetooth to your phone for hands-free operation



Evacuation Centers



The screenshot shows the Garmin BaseCamp interface. On the left is a map of the Philippines, specifically the Bicol region, with several evacuation centers marked by blue triangles. A grey arrow points from the map towards the right side of the screen. The top menu bar includes File, Edit, Device, Find, View, Tools, Maps, Trip Planner, Adventures, BirdsEye, Sign In, and Help. The main menu dropdown says "Highest" and "OSM Philippines 20141205". The right side of the screen displays a Facebook-style post from "Schadow1 Expeditions". The post header reads "Showing Results" and "Points of Interest". It lists five evacuation centers: Anilag Elementary School (Evac Center) **, Bascaran Elementary School (Evac Center) **, Tabon-Tabon National High School (Evac Center) **, Bikal High School (Evac Center) **, and San Andres National School (Evac Center) **. Below this is a section for "Addresses" which says "No results found...". Further down are sections for "Garmin Adventures" and "User Data in 'Benham'" both stating "No results found...". At the bottom of the post, there are "Like", "Comment", and "Share" buttons, and a link to "Top Comments". The footer of the post includes the Schadow1 Expeditions logo and the URL <http://www.s1expeditions.com>. There are also "1 share" and "1 comment" indicators.

Evacuation Centers are now searchable on the latest GPS-assisted Navigation map of the Philippines #mapPHL

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<http://www.s1expeditions.com>

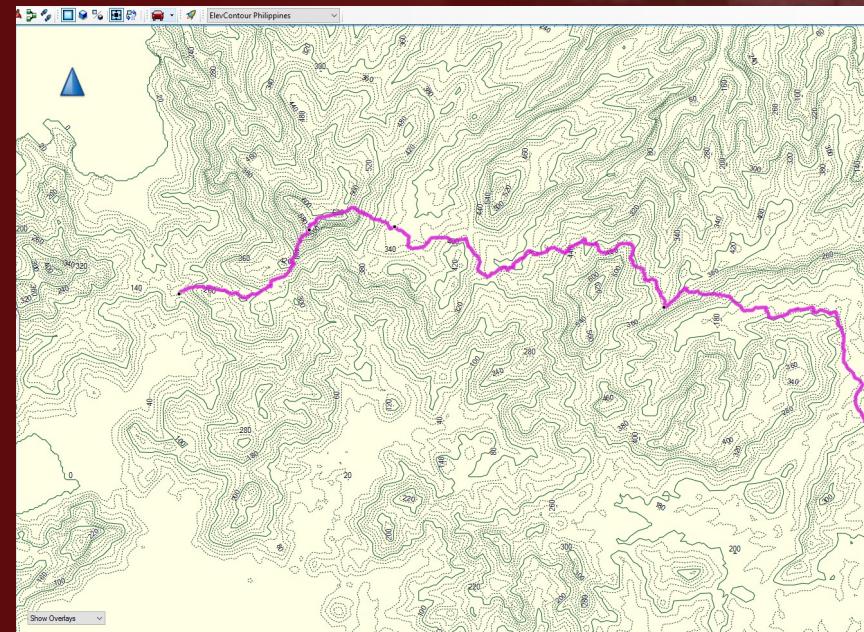
Evacuation Centers

20150128

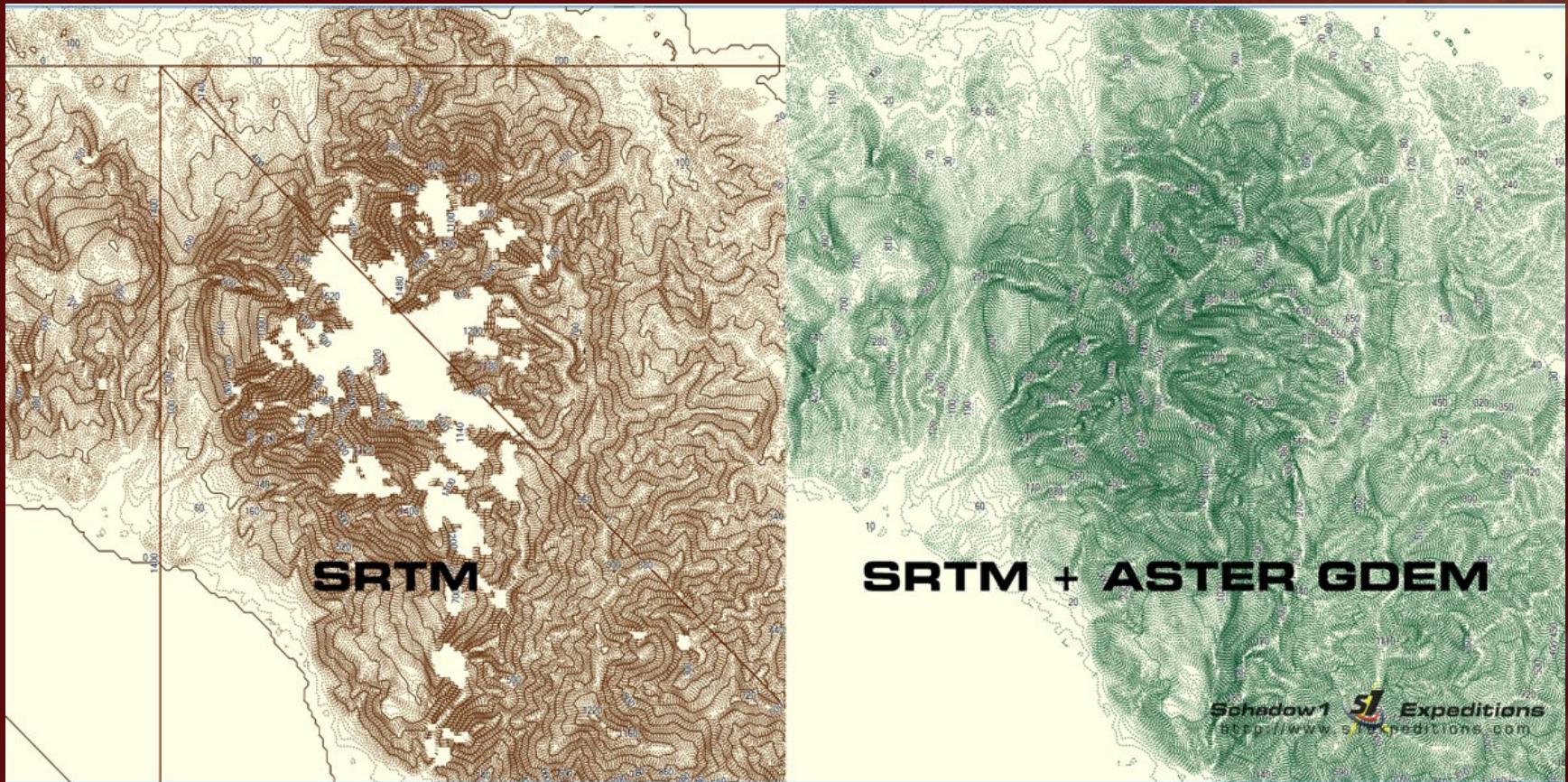
- mkgmap version 3419
- General POI searchability fixes and improvements.
- Evacuation Centers are identified with name extensions on normal times. Original POI types unchanged.
- Evacuation Centers icon identified with name extensions plus icon
and becomes searchable under Community\Police category during humanitarian activations.

Elevation Contour Map of the Philippines (30-meter accuracy)

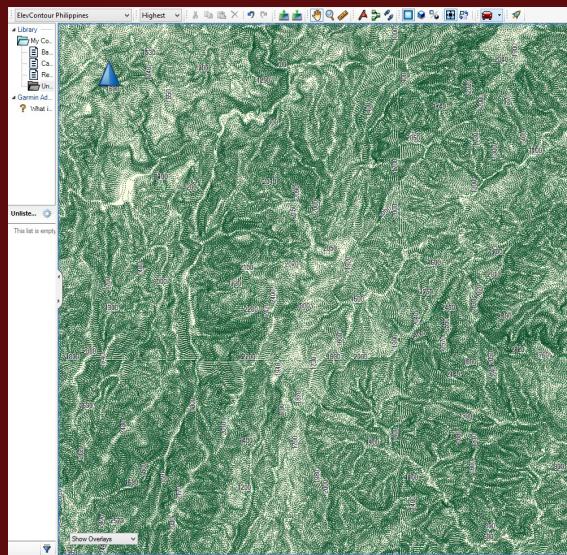
- Initial version released in 2014 based from SRTM 3-arc second accuracy (90m) with voids fixed using Aster GDEM Data
- 2nd and latest version released in 2015 based on SRTM 1-arcsecond accuracy (30m)



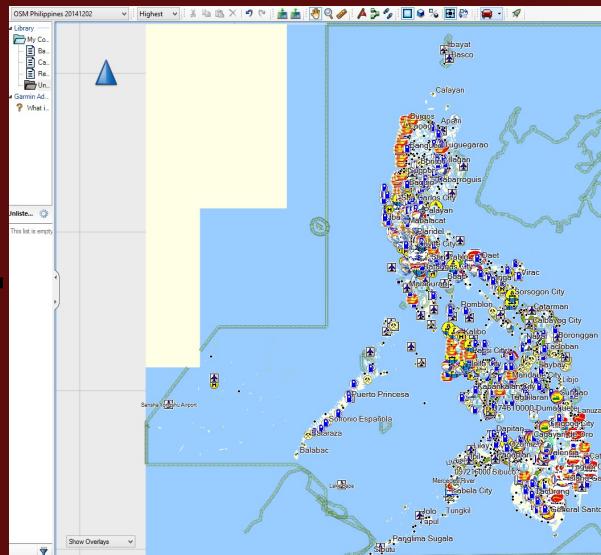
Sibuyan Island Elevation Contour



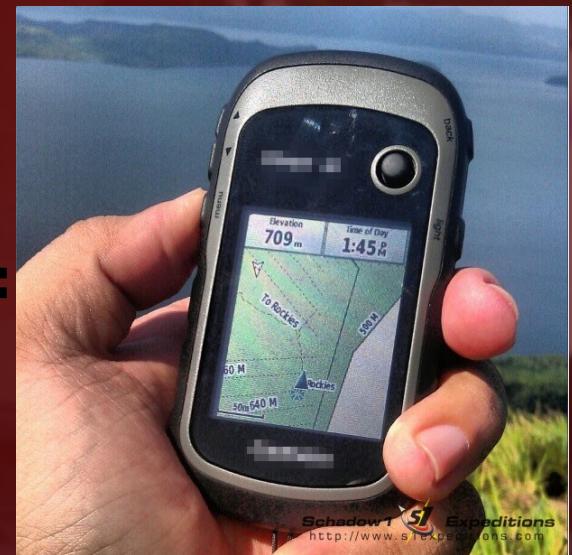
SRTM+ASTER GDEM Contour



OSM-PH Data GPS Map Export



GPS-Assisted Navigation Map



<http://www.s1expeditions.com/2014/03/143-new-elevation-contour-map-of-the-philippines.html>
<https://github.com/schadow1/osmphpgps>

During Humanitarian Activations

- Humanitarian Activations are activated through HOT.
- When the activation is in the Philippines, mapping contributors are directed to update specific locations that can be hit by disaster.
- Schadow1 Expeditions releases daily updates of the GPS map to reflect map changes from the activation.

Citations



- Humanitarian OpenStreetMap Team
- The Guardian
- Al Jazeera
- Philippines Humanitarian Response (OCHA)

- Using OSM Data for navigation guidance during humanitarian missions
- <http://www.s1expeditions.com/2013/11/13-osmforhumanitarianmissions.html>

Schadow1 Expeditions

<http://www.s1expeditions.com>

<https://www.facebook.com/s1expeditions>

<http://twitter.com/schadow1>

<http://Instagram.com/schadow1>

Download GPS Map of the Philippines
Elevation Contour (1 arc second accuracy)

Speed limits

<http://www.s1expeditions.com/p/openstreetmaps.html>



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