

# Assisting local governments towards disaster risk reduction

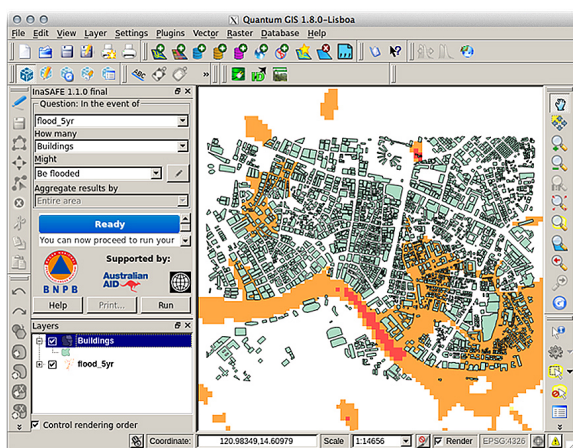
Training on participatory mapping and use of decision support tools



The Institute of Environmental Science for Social Change is a Jesuit research organization in the Philippines that promotes environmental sustainability and social justice through the integration of scientific methodologies and social processes. It is implementing an initial six-month work activity that will contribute to the initiative of the Department of Interior and Local Government in assisting the country's most vulnerable local governments gain more resilience to the harsh effect of disasters.

Philippines will be joining the Institute as co-trainers. This opportunity also assists OpenStreetMap gain broader visibility.

The Institute will also customize InaSAFE, a free software that produces realistic natural hazard impact scenarios, for use in the Philippine context, specifically catering to the needs and realities of the initial set of selected local governments. InaSAFE stands for Indonesia Scenario Assessment For Emergencies and is used across the country for better planning, preparedness and response activities, formulation of contingency plans, and community-based disaster risk management.



## Implementing Project Partners

With the Environmental Science for Social Change as the lead implementor, there is also the Department of Interior and Local Government at the national level and the World Bank-East Asia Pacific and East Asia-AusAid Infrastructure for Growth program that provides financial assistance and technical inputs. Trainor volunteers from OpenStreetMap-Philippines will join the training activities while Georepublic Japan, a private organization that develops information technology solutions based on open source software projects, will provide programming support.

The Institute will take the lead in providing training on participatory mapping to selected local governments in flood-prone areas by using OpenStreetMap tools for effective community engagement and data collection and maintenance. Volunteers from OpenStreetMap-

The initial set of local governments scheduled to undergo training are the municipalities of Candaba, Guagua, and Lubao, all in the province of Pampanga.

Implementing partners



Funding support



Environmental Science for Social Change

1/F Manila Observatory Building, Ateneo de Manila University Campus, Loyola Heights, Quezon City 1108, Philippines

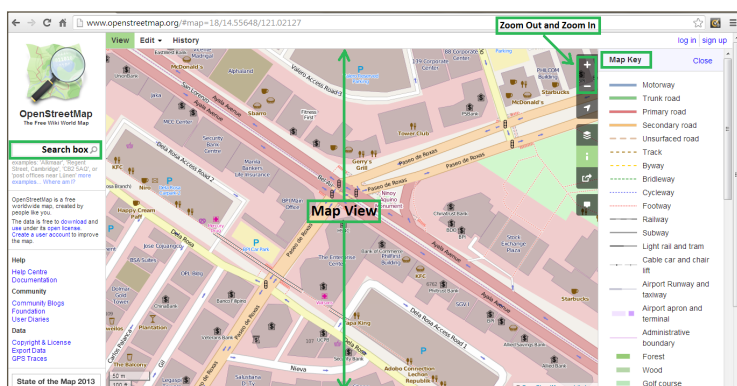
Telephone: +63 2.926.0452 Fax: +63 2.426.0554 Website: <http://essc.org.ph/>

## Background

The Philippines is ranked third out of 173 countries in terms of vulnerability to disaster risks and natural hazards (World Risk Index 2011, United Nations University-Institute for Environment and Human Security). Given this high-risk status, greater initiatives on local disaster risk reduction and management and comprehensive place-specific hazard assessments are critical and urgent.

A major element in effectively minimizing risks during extreme weather events at the local level is the capacity of local governments to effectively respond to the various phases of disaster events (pre-, during, and post-). Contributing to this is the use of decision support tools that enables the use of data from responsible national agencies and from local updated information.

It is in this context that the Institute was invited to partner with the World Bank's East Asia Pacific Disaster Risk Management portfolio and the Department of Interior and Local Government to implement a six-month project on Participatory mapping and LGU decision support tools for disaster risk reduction.



*OSM maps cover the whole world and have the capacity to show the features that are important to users.*

## Project Objectives

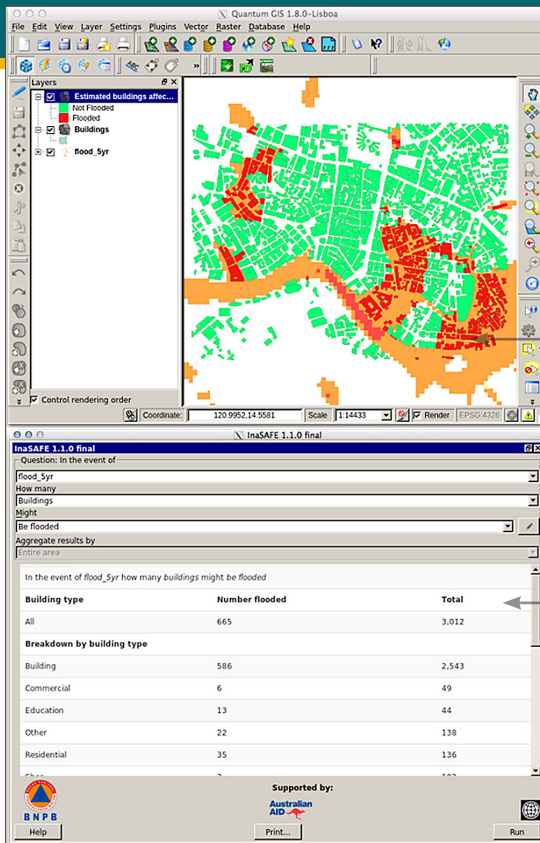
The project will provide training on participatory mapping and InaSAFE support to the Philippine government in disaster risk reduction activities through these strategies:

- Supporting the growth of the OpenStreetMap community that has competence in leveraging participatory mapping methods with OpenStreetMap tools and Web-based map platforms and is a proven effective approach to community engagement and in obtaining data
- Supporting the customization of InaSAFE that will leverage the InaSAFE initiative with the decision support tool component of the project, having been developed and implemented in Indonesia so far. The Department of Interior and Local Government identified InaSAFE's potential in assisting local governments design their contingency and land use plans.

## Integration with the institutional work program on risk resilience

This effort is a critical contribution to the institutional work program of the Environmental Science for Social Change on risk resilience that is undertaken in collaboration with partners who seek ways to reduce the risks of weather events when these trigger geomorphologic hazards such as floods, landslides, and drought.

The work requires an active engagement with local communities, national and local government, faith-based organizations, educators, professionals, media, academe, and other civil society organizations so that we contribute to the development of emerging structures that assist “centres of living and learning” across Asia Pacific and sustain engagements in disaster risk reduction. There are three major elements in the Institute's approach to the risk resilience work program:



In the event of a flood for example, how many buildings might be closed for possible evacuation?

*A map differentiating the dry areas and areas with flooded buildings will appear in the Results section.*

*A summary of the total number of flooded buildings and buildings that might be temporarily closed will also be generated.*

## Open Source Tools to be used

### OpenStreetMap or OSM

OpenStreetMap is a tool for creating and sharing map information. Anyone can contribute and thousands of people add to the project daily. OSM maps are saved on the Internet and can be accessed any time, totally free. OSM-Philippines encourages all Filipinos to contribute to the OpenStreetMap Project and work together to create a free open-source map for the entire Philippines. To learn more about OSM, please visit <http://learnosm.org/en>.

### InaSAFE

InaSAFE is a free software tool and is a plugin for QGIS. It provides a simple but rigorous way to combine data from the science community, local governments, and communities, thus laying a basis for insights and analysis into the likely impacts of future disaster events. The software is focused on examining in detail the impacts a single hazard would have on a specific sector. Anyone with basic computer skills can quickly learn to use InaSAFE to explore the potential impact of a disaster event and generate maps and reports. Because the software is free and open, more advanced users can also add new questions and data from new sectors. InaSAFE was awarded by BlackDuck as one of the top 10 “open-source rookies of the year”. The recognition highlights the exemplary multi-institutional collaborative development of InaSAFE over the last two years. To learn more about InaSAFE, please visit <http://inasafe.org>.

- Learning, to improve understanding of natural hazards and related risks through scientific analysis and disaster risk assessment
- Creating, to develop capacity for risk reduction through social preparedness
- Accompanying, to build a regional network of partners and collaborators who contribute to dialogue and exchange on disaster risk reduction and management

As the Institute envisions a trusting and empowering society working for sustainable resource management, ecological services, and human security, there is a critical need to develop environmental mechanisms with communities and local governments in the Philippines to promote appropriate resource management and implementation. Such a goal requires harnessing the Institute's full complement of its competence and capacities in resource mapping, geomatics, landscape and watershed analysis, social analysis, and communications, thus ensuring that we are of service to those in need.