

EMPOWERING LOCAL GOVERNMENTS USING FREE GIS AND REMOTE SENSING TECHNOLOGIES: BEST PRACTICES AND CHALLENGES IN THE PHILIPPINES

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Many communities in the Philippines are particularly vulnerable to natural disasters. The often cited reasons are climate change, rapid urbanization and precipitous population growth. But the most critical factor is the lack of technical capacity of local governments to prepare and respond to unexpected natural events.

At the national level, most government agency has the personnel and technology to collect remote sensing data and convert data into maps. As a matter of fact, base maps and 1:50,000 hazard maps already exist for many provinces.

However, most local government units (LGUs) lack the technical capacity to prepare and respond to disasters. Remote sensing technology is almost non-existent at the local level. In some areas, geographic information system (GIS) is present; however, the implementation varies and lacks cohesion. Most GIS also are bogged with proprietary technologies making their initiatives unsustainable.

As an acknowledgement to the importance of addressing natural disasters to ensure food security, the World Food Programme (WFP) – Philippines, embarked on a disaster preparedness and response (DPR) programme in 2010. The main objective of the programme was to help build the capacity of local governments prepare, reduce risk and manage disasters. In the first year, the programme was implemented in four provinces and nine municipalities. On its second year, the programme implementation was continued on the four provinces while seven municipalities and four cities were added to the original set of local areas. For this year, the programme will be implemented in the original four provinces, 16 municipalities and four cities plus four new provinces and eight more municipalities.

One of the major components of the programme was the GIS project. The GIS project aimed to build the capacity of local government units to develop their GIS and remote sensing capabilities for DPR. The expected output of the project was the development of basemaps, hazard maps and Google Earth-based interactive maps in all programme areas.

The GIS project has several capability-building activities for LGU personnel. These include the training of trainers, mentoring/tutorial trainings, participatory GIS-RS training, pilot-testing of the GIS system and GIS-RS harmonization/consolidation between and among LGU-civil society sectors.

To date, the GIS project has achieved a lot. All programme areas already prepared their basemaps, some hazard maps and interactive Google Earth-based maps. Some areas already have technical people that can provide GIS-RS assistance to their constituencies or other municipalities in their respective provinces.

In the process of achieving its outputs, the project learned a lot. One is the effective use of free and open source technologies to implement GIS-RS capability-building activities at the local level. It has also faced a lot of challenges such as the dearth of technical people at the local level.

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