



Nationwide high-resolution mapping of hazards in the Philippines (Plinius Medal Lecture)

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The Philippines being a locus of typhoons, tsunamis, earthquakes, and volcanic eruptions, is a hotbed of disasters. Situated in a region where severe weather and geophysical unrest is common, the Philippines will inevitably suffer from calamities similar to those experienced recently. With continued development and population growth in hazard prone areas, it is expected that damage to infrastructure and human losses would persist and even rise unless appropriate measures are immediately implemented by government. Recently, the Philippines put in place a responsive program called the Nationwide Operational Assessment of Hazards (NOAH) for disaster prevention and mitigation. The efforts of Project NOAH are an offshoot of lessons learned from previous disasters that have inflicted massive loss of lives and costly damage to property. Several components of the NOAH program focus on mapping of landslide, riverine flood and storm surge inundation hazards. By simulating hazards phenomena over IFSAR- and LiDAR-derived digital terrain models (DTMs) using high-performance computers, multi-hazards maps of 1:10,000 scale, have been produced and disseminated to local government units through a variety of platforms. These detailed village-level (barangay-level) maps are useful to identify safe evacuation sites, planning emergency access routes and prepositioning of search and rescue and relief supplies during times of crises. They are also essential for long-term development planning of communities. In the past two years, NOAH was instrumental in providing timely, site-specific, and understandable hazards information to the public, considered as best practice in disaster risk reduction management (DRR). The use of advanced science and technology in the country's disaster prevention efforts is imperative to successfully mitigate the adverse impacts of natural hazards and should be a continuous quest - to find the best products, put forth in the forefront of battle against disasters.