

Q&A: Landslide

Q: What is a landslide? A: Landslide is the usually rapid downward movement of rock, soil and earth debris materials along a slope.

Q: What promotes the occurrence of landslide?



a) Steep slopes



b) Intense weathering of rocks and poor cohesion of soil



c) Overloading of slope materials



d) presence of open fractures

Q: What are the impending signs of a landslide?



a) Presence of terraces or ladder-like earth movement



b) Presence of tension cracks



c) Tilting trees



d) Emergence of springs, seeps, or saturated ground in areas that have not typically been wet before



e) Doors jamming, walls tilting, floors cracking

Q: What triggers or pushes the slope to slide down?

A: a) Earthquake, and b) Intense and continuous period of rain



BEFORE Typhoon Pepeng, April 2009. Little Kibungan, Pugaos, La Trinidad, Benguet. Across is the signage site in Pugaos, La Trinidad, 28 April 2009.



AFTER Typhoon Pepeng, October 2009. Little Kibungan, Pugaos, La Trinidad, Benguet. Slopes bounding the southern portion of the area where debris slide. Also shown are large tension cracks developing upslope, near the crown of the slide that hit Sitio Little Kibungan.

Landslide: vegetation vs. slope characteristics

The roots of a tree can only hold about 5-7 meters of soil/rock materials. Hence, no amount of vegetation can stop the occurrence of a large-scale or deep-seated landslide.

Provided that two or more promoting factors are present in a slope, landslide could occur in the event of intense rainfall or earthquake.

Landslide can also be attributed to deforestation. However, its effect is only shallow and very limited in scope as compared to a large-scale or deep-seated landslide.



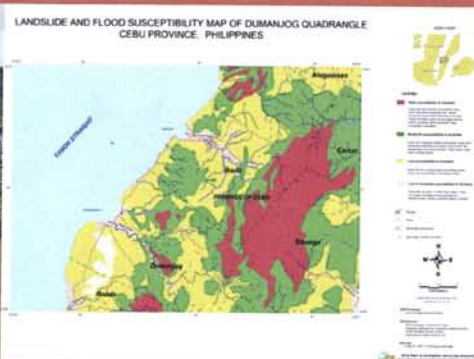
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The National Geohazards Mapping and Assessment Program



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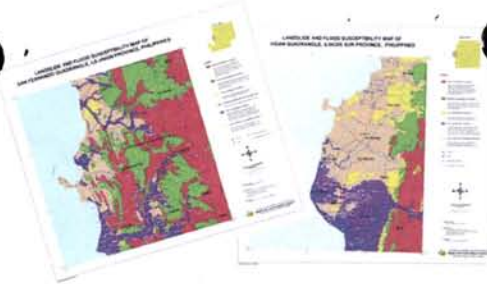
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GEOHAZARDS ASSESSMENT AND MAPPING AT 1:50,000 AND 1:10,000 SCALES; COASTAL GEOHAZARDS MAPPING

Aided by GPS (Global Positioning System) for accurate location of susceptible areas, a team of geologists conducts geohazards assessment and mapping in a certain municipality and studies the geological factors that affect the area's susceptibility to landslide, flood and coastal erosion.



Data gathered in the field are processed at MGB's mapping unit using a highly dependable mapping software.



PRODUCTION, GENERATION AND DISTRIBUTION OF GEOHAZARDS MAPS

Landslide and flood susceptibility maps are generated through processing of GIS-based remote sensing and field data.

The resulting geohazards maps are scales of 1:50,000 or 1:10,000. The former is an indicative map, while the latter is a zoomed-in map covering a smaller area with greater detail.

These maps are user-friendly and may be used by LGUs in their urban planning and disaster risk mitigation programs.



PROVINCE-WIDE IEC FOR LGUS AND TEACHERS

Results of geohazards mapping and assessment gathered are immediately presented to the concerned LGUs and public school teachers through our province-wide information, education and communication (IEC) campaigns.



PROVISIONS OF GEOHAZARD MAPS, LANDSLIDE/FLOOD THREAT ADVISORY AND EXECUTIVE SUMMARY

At the end of each field season, geohazard advisories, executive summary of geohazard assessment reports, and geohazard maps are submitted to the local government officials in the provincial, municipal and barangay levels.



MGB'S COMMITMENT: MAXIMIZING AWARENESS, MINIMIZING RISK



COMMUNITY-BASED EARLY WARNING SYSTEM FOR LANDSLIDE

An early-warning signage will be installed in a specific area identified by MGB as highly susceptible to landslide through an agreement between the MGB and the local government concerned.

IEC ON GEOHAZARDS

Posters, pamphlets, brochures, cds and dvds on landslide and flood are distributed to LGUs, teachers and stakeholders.



ASSESSMENT OF POSSIBLE RELOCATION SITES BY MGB AS IDENTIFIED BY THE LGU

In areas highly susceptible to either landslide or flood, relocation is recommended.

The LGU looks for possible relocation sites, while the MGB geologically assesses the identified relocation sites whether or not it is fit for human habitation.

Visit our website - www.mgb.gov.ph

