The National Geohazard Mapping and Assessment Program (NGMAP) is a priority undertaking of the Department of Environment and Natural Resources, implemented by the Mines and Geosciences Bureau. The NGMAP began through Presidential directive following the February 17, 2006 Guinsaugon, St. Bernard, Southern Leyte landslide tragedy which claimed more than 1,000 lives.

The objectives of the NGMAP are to identify areas susceptible to various geologic hazards, particularly, rain-induced landslides, floods, and coastal hazards, and to increase public awareness to lessen or mitigate the negative impacts of natural disasters.

The DENR-MGB completed the 1:50,000 scale assessment in 2010. This was followed on 1:10,000 scale assessment, which was completed in 2014. The IEC (information, education, communication) campaign, a component of the DENR-MGB National Geohazard Mapping and Assessment Program, was conducted down to barangay level from 2015 to 2017. The 1:10,000 scale landslide and flood susceptibility maps have been disseminated to the provincial, city, municipal, and barangay governments. The 1:10,000 scale landslide and flood susceptibility maps can be downloaded at: www.mgb10.com / www.mgb.gov.ph.

The Coastal Geohazard Assessment Program aims to determine the coastal areas that are susceptible to coastal erosion and/or accretion, measure coastal profiles, and conduct coastal characterization, which, in combination with historical data sets, are used to generate coastal geohazard maps. With assistance from the Mines and Geosciences Bureau-Central Office and other MGB Regional Offices, the Coastal Geohazard Assessment Program of Region X was completed in 2018.

After the completion of the 1:10,000 scale geohazard mapping and assessment, the DENR-MGB started the conduct of Vulnerability and Risk Assessment of cities and municipalities in 2015. The VRA aims to develop flood and landslide risk information by evaluating existing conditions of vulnerability that could potentially harm exposed elements such as people and critical infrastructure and to provide technical information to the local government units for the updating and modification of their Comprehensive Land Use Plans / Disaster Risk Reduction and Management Plans / and other disaster/climate change-related programs. The assessment involves the identification of population centers and inventory of critical infrastructure such as road networks, bridges, airports, schools, hospitals, evacuation centers, police stations, power stations, lifelines and other critical facilities.

The DENR-MGB expanded its Geohazard Mapping and Assessment Program to include Subsidence Susceptibility Assessment following the October 2013 7.2 magnitude earthquake.
which struck the Bohol-Cebu area. Land subsidence is the lowering of the land surface. It can occur rapidly due to sinkhole collapse or during a major earthquake. Subsidence due to sinkhole collapse in karst is one of the most dangerous geohazards due to its extreme unpredictability. Karst topography is a landscape characterized by features indicating dissolution of underlying soluble rocks by surface or groundwater. These soluble rocks are mostly carbonate rocks consisting of limestone or dolomite.

Following the various calamities experienced in various parts of the country, Congress, through the General Appropriations Act, mandated that, the respective heads of the agencies of the government shall ensure that implementation of all infrastructure projects under their coverage shall be constructed in locations, areas or sites that are not included in the critical geohazard areas or no-build zones identified by the Mines and Geosciences Bureau. The Department of Budget and Management issued a Budget Memorandum that “clearance” from the Mines and Geosciences Bureau must be secured as to the climate change safety of the location of the infrastructure.

The DENR-MGB National Geohazard Mapping and Assessment Program plays a major role in the country’s disaster risk reduction and management program. Its aim is on saving lives, saving properties, protecting investments.