

Introduced by Senator Miriam Defensor Santiago

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EXPLANATORY NOTE

On December 26, 2004, tsunamis swept across the Indian Ocean from Thailand to Somalia following a magnitude 9.0 quake that was centered about 100 miles (160 km) off the coast of Indonesia's Sumatra Island at a depth of about 6.2 miles (10 km). (CNN.com)

The 26 December 2004 tsunami, triggered by a massive earthquake off the coast of Indonesia, killed close to 140,000 people in Asia and Africa, and the numbers are still increasing. In Indonesia alone, 130,000 people are listed as missing. Most of the victims lived along the state's lengthy coastline, and state officials are looking at ways to prevent natural disasters from exacting such a heavy toll in the future.

Tsunamis are very large ocean waves caused by underwater earthquakes or volcanic eruptions, which can travel thousands of miles in open water. Tsunamis are threats to low-elevation coastal areas and insular areas.

In the Philippines, although the recent upheaval spared our country, provinces and cities situated near the coastal areas face the risk of being hit by catastrophic hazards like tsunamis, storms surges, coastal and submarine landslides and flooding. Mines and Geosciences Bureau's (MGB) chief marine geologist Angel Bravo said the vulnerability of said provinces and cities to catastrophic hazards is due to the existence of five trenches at the bottom of the sea around the Philippine archipelago.

A study conducted by a team of MGB marine geologists aimed to identify and assess the risk faced by the country's coastal areas from marine geo hazards, disclosed the existence of four trenches which include the following: (1) the Manila Trench which extends from Taiwan down to the offshore area of Mindoro at the side of the China Sea; (2) the Sulu Trench extending from the offshore area of Romblon down to offshore area of northwest Mindanao; (3) the Cotabato

Trench also located at the offshore area at the northern tip of Mindanao; and (4) the Philippine Trench which runs from the southern tip of the Philippine archipelago at the side of the Pacific Ocean northward up to the eastern coastline of Infanta, Quezon

The key steps in reducing damage caused by natural calamities are to assess the hazards, educate the public to the hazards, monitor the Earth's seismic activity on a real-time basis, and alert local governments and the public in time for them to take appropriate action. Hence, this bill seeks to require the Philippine Institute of Volcanology and Seismology (PHIVOLCS) and the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) to establish the natural calamities' hazard mitigation program.*

Miriam Defensor Santiago
MIRIAM DEFENSOR SANTIAGO

* This bill was originally filed during the Thirteenth Congress, First Regular Session.

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1 AN ACT
2 TO REQUIRE THE PHILIPPINE INSTITUTE OF VOLCANOLOGY AND
3 SEISMOLOGY (PHIVOLCS) AND THE PHILIPPINE ATMOSPHERIC GEOPHYSICAL
4 AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA) TO
5 ESTABLISH THE NATURAL CALAMITIES' HAZARD
6 MITIGATION PROGRAM

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

7 SECTION 1. *Short Title.* — This Act shall be known as the “Calamity Hazard Mitigation
8 Program Act.”

9 SECTION 2. *Definition of Terms.* — For the purpose of this Act, the term:

10 (A) “Natural calamities” means the events caused by nature resulting in great loss and
11 misfortune. These include, but are not limited to, typhoon, earthquake, tsunami,
12 landslide, tornado, etc.

13 (B) “PHIVOLCS” means the Philippine Institute of Volcanology and Seismology.

14 (C) “PAGASA” means the Philippine Atmospheric, Geophysical, and Astronomical
15 Services Administration.

16 (D) “Program” means the Natural Calamities’ Hazard Mitigation Program.

17 (E) “DENR” means the Department of Environment and Natural Resources.

18 (F) “MGB” means the Mines and Geosciences Bureau.

19 SECTION 3. *Natural Calamities’ Hazard Mitigation Program.* —

20 (A) *In General.* — The PHIVOLCS and PAGASA shall establish the natural calamities’
21 hazard mitigation program for all coastal and insular areas, to perform hazard assessment,
22 monitoring and warning, and public education functions. Such program shall —

- (1) Provide warnings of anticipated calamities, and maintain the equipment necessary to make such warnings;
- (2) Conduct periodic tests of the calamities' warning system to ensure its operational effectiveness;
- (3) Make calamities' warning system available to the broadest extent practicable;
- (4) Establish a long-term plan to determine areas of possible inundation for all threatened coastal and insular areas of the country, beginning with the most populous;
- (5) Coordinate the preparation of local evacuation plans for susceptible communities; and
- (6) Affiliate and coordinate with and maintain membership in international organizations dealing with various calamities such as the World Meteorological Organization (WMO), Pacific Tsunami Warning Center (PTWC), GeoHazards International (GHI), etc..

(B) *Primary Beneficiaries.* – The program established under subsection (1) shall be designed for the benefit of all coastal and insular areas of the country, particularly those near in the Manila Trench which extends from Taiwan down to the offshore area of Mindoro at the side of the China Sea; the Sulu Trench extending from the offshore area of Romblon down to offshore area of northwest Mindanao; the Cotabato Trench also located at the offshore area at the northern tip of Mindanao; and the Philippine Trench which runs from the southern tip of the Philippine archipelago at the side of the Pacific Ocean northward up to the eastern coastline of Infanta, Quezon.

(C) *Other Beneficiaries.* – Such other coastal and insular areas as may be pointed out by the PHIVOLCS and PAGASA, in coordination with the DENR, through the MGB, are also beneficiaries of this program.

SECTION 4. *Coordinating Agency.* – The PHIVOLCS and PAGASA are hereby authorized to coordinate with the DENR, through the MGB, in implementing this program.

1 SECTION 5. *Authorization of Appropriation.* – To carry out the provisions of this Act,
2 such sum as may be necessary is hereby authorized to be appropriated from the National
3 Treasury.

4 SECTION 6. *Regulations.* – Not later than sixty (60) days after the date of the enactment
5 of this Act, the PHIVOLCS and the PAGASA shall promulgate and issue such regulations as are
6 necessary to carry out the provisions of this Act.

7 SECTION 7. *Separability Clause.* – If any provision or part hereof is held invalid or
8 unconstitutional, the remainder of the law or the provision not otherwise affected shall remain
9 valid and subsisting.

10 SECTION 8. *Repealing Clause.* – Any law, presidential decree or issuance, executive
11 order, letter of instruction, administrative order, rule or regulation contrary to, or inconsistent
12 with, the provision of this Act is hereby repealed, modified or amended accordingly.

13 SECTION 9. *Effectivity Clause.* – This Act shall take effect fifteen days (15) days after
14 its publication in at least two (2) newspapers of general circulation.

Approved.

/jpa