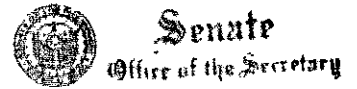


SIXTEENTH CONGRESS OF THE REPUBLIC)
OF THE PHILIPPINES)
First Regular Session)



'13 AUG 29 P5:12

SENATE
S. No. 1444

RECEIVED BY: ji

Introduced by Senator Miriam Defensor Santiago

EXPLANATORY NOTE

The Constitution, Article 2, Section 5 states that:

The xxx protection of life, liberty and property, and the promotion of the general welfare are essential for the enjoyment by all the people of the blessings of democracy.

The Philippines, being an archipelagic country that sits within the Pacific Ocean's "Ring of Fire", is susceptible to natural hazards and calamities.

One such natural hazard is a *tsunami*. A tsunami is a series of sea waves commonly generated by under-the-sea earthquakes and whose heights could be greater than 5 meters. Tsunamis cause damage by two mechanisms: the smashing force of a wall of water travelling at high speed, and the destructive power of a large volume of water draining off the land and carrying a large amount of debris with it, even with waves that do not look large.

Most tsunamis, about 80 percent, happen within the "Ring of Fire," a geologically active area where tectonic shifts make volcanoes and earthquakes common.

One of the most recent devastating series of tsunamis happened in 2004 known as the South Asian tsunami or the Boxing Day tsunami. These tsunamis did not happen in the Pacific Ocean but were caused by the Indian Ocean earthquake with an epicentre off the west coast of Sumatra, Indonesia. It was one of the deadliest natural disasters in recorded history. Indonesia was the hardest-hit country, followed by Sri Lanka, India, and

Thailand. Over 230,000 people were killed, and coastal communities were inundated with waves up to 30 meters (98 ft) high.

When the Boxing Day Tsunami hit Thai shores, no one knew the tsunami was coming. The devastating waves killed 5,395 people - many of them foreign tourists - with another 2,817 people swept away or lost. Over 58,550 people were affected, including 1,480 children who lost one or both parents.

However, today Thailand reportedly has one of the best warning systems in Southeast Asia. To prevent another disaster from an earthquake-driven tsunami, Thailand has set up warning towers and tsunami-detection buoys in the sea that gather information used to calculate the wave direction and expected arrival time. This can be completed in two minutes, allowing their Tsunami centre to send out correct warning messages to the public via satellite and warning towers.

In the Philippines, the Philippine Institute of Volcanology and Seismology (PHIVOLCS), one of the service agencies of the Department of Science and Technology, monitors volcano, earthquake, and tsunami activity, and issues warnings as necessary. It is mandated to mitigate disasters that may arise from such volcanic eruptions, earthquakes, tsunamis, and other related geotectonic phenomena

Recently, the PHILVOCS completed a project to develop, fabricate and install GSM-activated warning sirens in high-risk coastal communities; and to train and educate stakeholders on how to use the early warning system and how to respond properly during tsunami emergencies. The system is a Grant-in-Aid project of the DOST titled "Establishment of a Cost-Effective Local Tsunami Early Warning System for Selected High-Risk Coastal Communities of the Philippines" or TeWS. It aims to provide coastal folks with a reliable yet cost-effective device for tsunami forecasting. Aside from its efficiency and low-maintenance quality, the technology is designed by local scientists and experts from DOST, ASTI, and PHIVOLCS.

The efforts are commendable; however, instead of relying on grants, it is time the government invest resources in long-term programs that would facilitate the research and development of technology and systems that would equip our scientists with the capacity to forewarn our numerous coastal communities of possible tsunami activity. It is not impossible that such a situation similar to Thailand's 2004 tsunami disaster may happen in the Philippines where coastal towns are usually filled with tourists and fisherfolk.

With the end view of protecting life and property, this bill seeks to strengthen the capability of the PHILVOCS to conduct tsunami detection, forecasting, warnings and tsunami hazard mitigation, by establishing the Tsunami Ready Program under the PHILVOCS and appropriating funds for it.


MIRIAM DEFENSOR SANTIAGO

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SIXTEENTH CONGRESS OF THE REPUBLIC)
OF THE PHILIPPINES)
First Regular Session)



Senate
Office of the Secretary

13 AUG 29 P5:12

SENATE
S. No. 1444

RECEIVED BY: *[Signature]*

Introduced by Senator Miriam Defensor Santiago

1 AN ACT
2 ESTABLISHING A PROGRAM TO STRENGTHEN TSUNAMI DETECTION,
3 FORECAST, WARNING, AND TSUNAMI HAZARD MITIGATION CAPABILITIES
4 OF THE PHILIPPINE INSTITUTE OF VOLCANOLOGY AND SEISMOLOGY
5

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

6 SECTION 1. *Short Title.* - This Act shall be known as the "Tsunami Ready Act."

7 SECTION 2. *Establishment of a Tsunami Ready Program.* -The Philippine
8 Institute of Volcanology and Seismology (PHILVOCS) shall operate a program to be
9 known as the, "Tsunami Ready Program," which shall strengthen the PHILVOCS'
10 capacity to conduct tsunami detection, forecasting, warnings and tsunami hazard
11 mitigation. Under this Program, the PHILVOCS shall be mandated to:

12 (A) Monitor international tsunami warning activities around the world;

13 (B) Obtain, research, develop, utilize and maintain equipment and technology
14 capable of real-time tsunami detection, forecasting, warning and reporting;

15 (C) Identify vulnerable coastal areas and create inundation maps;

16 (D) Install and maintain a network of tsunami warning towers, sirens and other
17 early warning systems in high-risk coastal communities;

1 (E) Create and maintain a communications network with the capability to
2 disseminate warnings and other information rapidly to government officials
3 and at-risk communities;

4 (F) Conduct preparedness training and tsunami emergency response training for
5 stakeholders; and

6 (G) Maintain data quality and management systems to support the requirements of
7 the program.

8 SECTION 3. *Reporting to Congress.* – The Secretary of the Dept. of Science and
9 Technology shall conduct an evaluation of the Tsunami Ready Program by reviewing the
10 current status and progress of the various program components such as tsunami detection,
11 forecasting, warning, preparedness and emergency response training and hazard
12 mitigation. The evaluation report shall be submitted to Congress every two (2) years
13 after the effectivity of this Act.

14 SECTION 4. *Appropriations.* - There shall be authorized to be appropriated such
15 amounts as necessary to carry out the provisions of this Act, to be included in the annual
16 budget of the PHILVOCS in the General Appropriations Act.

17 SECTION 5. *Separability Clause.* - If any provision or part hereof, is held invalid
18 or unconstitutional, the remainder of the law of the provision not otherwise affected shall
19 remain valid and subsisting.

20 SECTION 6. *Repealing Clause.* - Any law, presidential decree or issuance,
21 executive order, letter of instruction, administrative order, rule or regulation contrary to,
22 or inconsistent with, the provisions of this Act is hereby repealed, modified or amended
23 accordingly.

24 SECTION 7. *Effectivity Clause.* - This Act shall take effect fifteen (15) days after
25 its publication in at least two (2) newspapers of general circulation.

Approved,

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