

NINETEENTH CONGRESS OF THE )  
REPUBLIC OF THE PHILIPPINES )  
*Second Regular Session* )



23 JUL 17 P2 :42

**SENATE**  
S. No. 2316

RECEIVED BY:

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Introduced by Senator MARK A. VILLAR

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**AN ACT**  
**INSTITUTING A COMPREHENSIVE EARTHQUAKE MONITORING AND EARLY WARNING SYSTEM, APPROPRIATING FUNDS THEREFOR, AND FOR OTHER PURPOSES**

EXPLANATORY NOTE

The Philippines is located within the Pacific Ring of Fire, a region characterized by intense volcanic and seismic activities. The country has experienced a number of devastating earthquakes, which have resulted in loss of lives, damage to infrastructure and property, and economic disruption. In addition, it is feared that the "Big One" is already due to happen.

The key objective of this measure is to establish a nationwide, real-time earthquake monitoring system that detects, analyzes and provides early warning signals for seismic events. The system will gather robust data on seismic activity, enabling the government and disaster management agencies to respond more effectively to the risks posed by earthquakes.

The Philippine Institute of Volcanology and Seismology (PHIVOLCS) shall develop and implement a National Earthquake Monitoring and Early Warning System (NEMEWS) using the latest technology and best practices.

Advanced Earthquake Monitoring Centers shall be established within the PHIVOLCS regional offices, which shall collect and analyze data from seismic networks and provide accurate and timely earthquake monitoring services.

The PHIVOLCS shall establish a comprehensive network of seismic sensors strategically located throughout the country, with real-time data communication

equipment to facilitate rapid assessment and dissemination of earthquake information. An Earthquake Early Warning and Notification System shall be developed, allowing for the rapid distribution of warnings and alerts to the public and local government units.

This proposed measure represents a timely and critical investment in the country's disaster risk reduction and preparedness efforts. Instituting a comprehensive earthquake monitoring and early warning system will not only protect the lives and properties of millions of Filipinos but also minimize the economic and social impacts of these natural disasters.


In view of the foregoing, the approval of this bill is sought.



**MARK A. VILLAR**

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**WARNING SYSTEM, APPROPRIATING FUNDS THEREFOR, AND FOR OTHER**  
**PURPOSES**

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

1 Section 1. *Short Title.* – This Act shall be known as the "Philippine Advanced  
2 Earthquake Monitoring and Early Warning System Act of 2023."

3 Sec. 2. *Declaration of Policy.* – The State recognizes the need for a reliable and  
4 advanced earthquake monitoring and early warning system to enhance public safety,  
5 reduce damage to property, and minimize the loss of lives during any earthquake event.

6 The State shall, therefore, invest in developing, implementing, and maintaining a  
7 comprehensive earthquake monitoring and early warning system and shall promote  
8 community preparedness, information dissemination, and coordination among relevant  
9 government agencies and local government units (LGUs).

10 Sec. 3. *National Earthquake Monitoring and Early Warning System.* – The Philippine  
11 Institute of Volcanology and Seismology (PHIVOLCS) shall develop and implement a  
12 National Earthquake Monitoring and Early Warning System (NEMEWS) using the latest  
13 technology and best practices.

1 The NEMEWS shall have the following components;

2 (a) Advanced earthquake monitoring centers;

3 (b) A network of seismic sensors and real-time data communication equipment;

4 (c) An earthquake early warning and notification system;

5 (d) A public information dissemination and communication campaign; and

6 (e) Research and development programs for system improvements.

7 *Sec. 4. Establishment of Advanced Earthquake Monitoring Centers.* – Advanced  
8 Earthquake Monitoring Centers shall be established within the PHIVOLCS regional offices.  
9 These centers shall collect and analyze data from seismic networks and provide accurate  
10 and timely earthquake monitoring services.

11 *Sec. 5. Network of Seismic Sensors and Real-Time Data Communication.* – The  
12 PHIVOLCS shall establish a comprehensive network of seismic sensors strategically  
13 located throughout the country, with real-time data communication equipment to  
14 facilitate rapid assessment and dissemination of earthquake information.

15 *Sec. 6. Earthquake Early Warning and Notification System.* – An Earthquake Early  
16 Warning and Notification System shall be developed, allowing for the rapid distribution of  
17 warnings and alerts to the public and LGUs.

18 *Sec. 7. Public Information Dissemination and Communication Campaign.* – The  
19 PHIVOLCS, in coordination with relevant government agencies, shall implement  
20 information dissemination campaigns, community preparedness workshops, and regular  
21 briefings for LGUs on earthquake hazards, preparedness, and response.

22 *Sec. 8. Research and Development.* – The PHIVOLCS shall continuously conduct  
23 research and development intended to enhance the system's performance, introduce  
24 innovative solutions, and ensure compatibility with international standards and best  
25 practices.

26 *Sec. 9. Funding.* - The amount necessary for the effective implementation of this  
27 Act shall be sourced from the current fiscal year's appropriation of PHIVOLCS under the  
28 General Appropriations Act (GAA). Additional funding may be sourced from existing  
29 appropriations for similar purposes, international loans, grants, or any other funding  
30 sources.

1           Sec. 10. *Implementing Rules and Regulations.* - The Department of Science and  
2 Technology (DOST) and PHIVOLCS, in consultation with the Department of Information  
3 and Communications Technology (DICT) and other relevant government agencies and  
4 stakeholders, shall promulgate the implementing rules and regulations necessary to carry  
5 out the provisions of this Act within ninety (90) days from its effectivity.

6           Sec. 11. *Separability Clause.* – Any portion or provisions of this Act that may be  
7 declared unconstitutional or invalid and shall not have the effect of nullifying other  
8 portions or provisions hereof as long as such remaining portions or provisions can still  
9 subsist and be given effect in their entirety.

10          Sec. 12. *Repealing Clause.* – All laws, presidential decrees, executive orders,  
11 memoranda, circulars, and other issuances, or parts thereof, which are inconsistent with  
12 the Act, are hereby repealed or modified accordingly.

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

*Approved,*