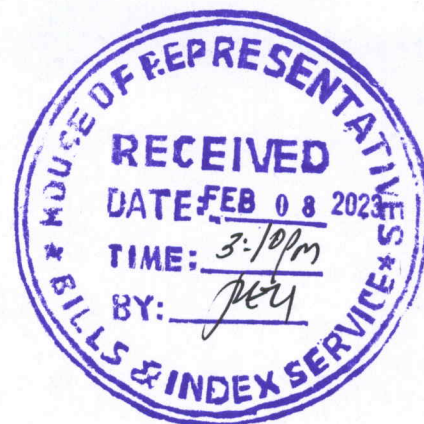


NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



HOUSE OF REPRESENTATIVES

H. B. No. 7121

Introduced by Representative Ralph G. Recto

**AN ACT
PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE INSTITUTE OF
VOLCANOLOGY AND SEISMOLOGY (PHIVOLCS), PROVIDING FUNDS
THEREFOR AND FOR OTHER PURPOSES**

EXPLANATORY NOTE

The location of the Philippines atop the Pacific Ring of Fire and adjacent to the Pacific Ocean makes the country susceptible to hazards like volcanic eruption, earthquakes, tsunamis and other seismic events. In 2020 alone, the Philippine Institute of Volcanology and Seismology (PHIVOLCS) recorded about 14,095 earthquake events within the Philippine area of responsibility – 59 of which have registered strengths of magnitude 5.0 and higher.

Volcanic eruption and other seismic activities cause significant damage to the lives and livelihood of those inhabiting the affected localities. The eruption of Taal Volcano in 2020, for instance, caused about P3.41 billion of damage to infrastructure and agriculture¹. More recently, the Magnitude 7.0 earthquake that rocked Metro Manila and the rest of Northern and Central Luzon last July 22, 2022 killed 11 people and caused an estimated P2.65 billion of damage to infrastructure². Given the proximity of many of our urban areas to active and potentially-active volcanoes and

¹ National Disaster Risk Reduction and Management Council (2020 March 6). Situational Report No. 87 re Taal Volcano Eruption.

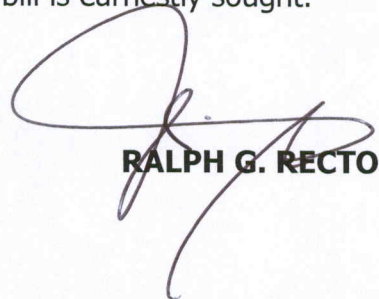
² National Disaster Risk Reduction and Management Council (2022 August 22). Situational Report No. 20 re Magnitude 7.0 Earthquake in Tayum, Abra.

faults, the Philippines needs a reliable government agency that can effectively mitigate the adverse effects of earthquakes and other geological and seismic events on the lives and properties of Filipinos.

This bill seeks to modernize PHIVOLCS, which traces its roots to the Commission of Volcanology created in 1952 by virtue of Republic Act No. 766. The bill directs the agency to undertake a three-(3-) year modernization program that would ensure that the technical and operational capacity of the agency remains responsive to the needs of the time. This modernization program covers the acquisition and upgrading of PHIVOLCS facilities and equipment; development of systems for monitoring, early warning, forecasting, and information dissemination; enhancement of mechanism for information sharing with other government agencies and non-government organizations; empowerment of the PHIVOLCS workforce; and strengthening of the agency's institutional linkages. To finance the modernization program, the bill creates a PHIVOLCS Modernization Fund comprised of five billion pesos (P5,000,000,000) to be sourced from the Bases Conversion and Development Authority, as well as proceeds from local or foreign loans, donations, grants, gifts, endowments, legacies and bequests.

Through these interventions, the objectives to strengthen the role of PHIVOLCS as the premier national volcano and earthquake monitoring and information agency and to attain its vision as the center of excellence in the field of volcanology and seismology would have better chances of being accomplished.

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



RALPH G. RECTO

/mdg

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

1 Section 1. *Title.* – This Act shall be known as the “PHIVOLCS Modernization
2 Act”.

3 Sec. 2. *Declaration of Policy.* – It is hereby declared a policy of the State to
4 recognize the critical role of science and technology in national development and
5 progress, and to utilize scientific and technical knowledge and information in ensuring
6 the sustainment of economic progress, the safety and well-being of the Filipino people,
7 and the protection and preservation of the environment and a balanced and healthful
8 ecology. Towards this end, and in cognizance of the need to strengthen public sector
9 capability to mitigate disasters that may arise from volcanic eruptions, earthquakes,
10 tsunamis and other related geotectonic phenomena through sound application of
11 geology, geophysics, geodetic engineering and allied sciences, the State shall
12 undertake the modernization of the Philippine Institute of Volcanology and Seismology
13 (PHIVOLCS) to improve the technical and operational capacity of the agency,
14 strengthen its role as the premier national volcano and earthquake monitoring and
15 information agency, and realize its vision as the center of excellence for related
16 information and services.

1 Sec. 3. *PHIVOLCS Mandate.* – The PHIVOLCS shall be mandated to perform the
2 following:

3 (a) Predict the occurrence of volcanic eruptions and earthquakes, and their
4 related geotectonic phenomena;

5 (b) Determine the manner by which volcanic eruptions and earthquakes
6 would occur and the areas that are likely to be affected by the same;

7 (c) Mitigate hazards of volcanic activities through appropriate and effective
8 systems of detection, forecast and warning; and

9 (d) Provide appropriate volcano, earthquake and tsunami products and
10 services for disaster risk reduction and preparedness and for other interventions in
11 furtherance of the socio-economic development objectives of the government and
12 the policies and objectives as provided in this Act.

13 Sec. 4. *PHIVOLCS Organizational Structure.* – The PHIVOLCS shall be an
14 attached agency of the Department of Science and Technology (DOST) for purposes
15 of coordinating policies and programs and aligning national science and technology
16 policies and priorities.

17 It shall be headed by an Executive Director who shall be appointed by the
18 President upon recommendation by the Secretary of Science and Technology and shall
19 have the rank and compensation of a Department Undersecretary.

20 The Executive Director shall be assisted by three (3) Deputy Executive Directors
21 for Operations Services; Research and Development and Science and Technology
22 Services; and Administration, Finance and General Services. The Deputy Executive
23 Directors shall be appointed by the President and shall have the rank and
24 compensation of a Department Assistant Secretary.

25 Sec. 5. *Qualifications.* – No person shall be appointed as Executive Director or
26 Deputy Executive Director of the PHIVOLCS unless such person is a natural-born
27 citizen and a resident of the Philippines, of good moral character, of proven
28 competence and integrity, has an advanced degree in geology, geodetic engineering,
29 volcanology, physics, and other related fields and with at least five (5) years of
30 competence and expertise in volcanology, geophysics, and or allied sciences:
31 *Provided,* That the Executive Director and the three (3) Deputy Executive Directors
32 shall be career executive officers.

1 Sec. 6. *PHIVOLCS Modernization Program.* – The PHIVOLCS Modernization
2 Program is hereby established in accordance with the declared policies and objectives
3 in this Act. The Executive Director of the PHIVOLCS, in coordination with the
4 Secretaries of Budget and Management and Socioeconomic Planning, shall formulate
5 the PHIVOLCS Modernization Program and oversee its implementation based on the
6 modernization objectives and program components as provided in Sections 7 and 8 of
7 this Act, respectively.

8 The PHIVOLCS Modernization Program shall indicate among others:

9 (a) The PHIVOLCS requirements in terms of personnel, equipment and
10 facilities during the various stages of modernization;

11 (b) The projects to be undertaken, including the equipment and technology
12 to be acquired and the facility to be constructed or upgraded; and

13 (c) The prioritization, implementation schedule and estimated cost of each
14 of the identified projects.

15 Sec. 7. *Objectives of the PHIVOLCS Modernization Program.* – The PHIVOLCS
16 Modernization Program shall be implemented in accordance with the following
17 objectives:

18 (a) To upgrade physical resources and operational techniques through
19 acquisition and development of state-of-the-art instruments, equipment, facilities
20 and systems to enhance current capabilities in providing useful, timely, accurate
21 and reliable volcanic and seismological monitoring, warning and information
22 services for use in decision-making in disaster preparedness, climate change
23 adaptation, water resources management, agriculture, transportation, health,
24 tourism and other sectors;

25 (b) To enhance research and development capabilities by adopting a
26 rationalized and integrated approach with focus on the improvement of basic
27 operations and specialized services;

28 (c) To integrate disaster risk reduction and management in sustainable
29 socioeconomic development planning at the national and local levels in
30 coordination with appropriate government agencies and other entities;

1 (d) To strengthen linkages and cooperation at the national level among the
2 various providers and users of geological, seismological and other services, and to
3 provide for the appropriate mechanisms for such purpose;

4 (e) To establish and enhance volcanic and seismological activity monitoring
5 service centers in strategic areas in the country to broaden the agency base for
6 the delivery of services in the countryside;

7 (f) To establish and maintain a technology-based data center consistent
8 with international standards to make information available to those involved in
9 disaster risk reduction and management planning, among others, whether from
10 the government or the private sector;

11 (g) To enhance public information, education and advocacy on geological
12 activities, as well as their impacts, risks and vulnerability;

13 (h) To facilitate the appropriate understanding and delivery of information,
14 products and services to decision makers, media, other users and the general
15 public; and

16 (i) To recruit and retain a competent, professional and committed
17 workforce through the provision of competitive base pay and other personnel
18 benefits.

19 Sec. 8. *Components of the PHIVOLCS Modernization Program.* – The PHIVOLCS
20 Modernization Program shall have the following components:

21 (a) Acquisition or upgrade of instruments, equipment, facilities, systems,
22 and operational techniques, especially those used for volcano, earthquake and
23 tsunami monitoring and warning systems: *Provided,* That a nationwide inventory
24 of existing government and nongovernment volcanic and seismological
25 instruments shall be undertaken prior to such acquisition or upgrade: *Provided,*
26 *further,* That the acquisition of new instruments, equipment and systems shall be
27 harmonized with the phase-out of uneconomical and obsolete instruments,
28 equipment and systems in the PHIVOLCS inventory;

29 (b) Sustained development of a network of volcano monitoring
30 infrastructure for early-warning and swift dissemination of information on observed
31 volcanic activity;

1 (c) Development and adoption of state-of-the-art early warning systems for
2 volcanic eruption;

3 (d) Establishment, operation and maintenance of advanced infrastructure
4 for earthquake and tsunami monitoring and information dissemination throughout
5 the Philippines;

6 (e) Establishment, operation and maintenance of monitoring systems for
7 earthquakes and other seismic disturbances throughout the Philippines, including
8 seismic activities in areas with moderate and high risk for tsunami or a volcanic
9 eruption;

10 (f) Measurement and observation of seismic activities in areas with
11 buildings and other critical structures, particularly in urban areas and those in
12 proximity to active faults;

13 (g) Development and adoption of machine learning capability for earthquake
14 forecasting, including the automated early-warning and information dissemination
15 capabilities during significant earthquakes, tsunamis and other seismic activities;

16 (h) Establishment of permanent PHIVOLCS facilities capable of
17 accommodating its data receiving and operation centers and research laboratories;

18 (i) Enhancement of research and development capability through a
19 rationalized and fully-integrated utilization of established earthquake and volcano
20 research laboratories, improvement of operations, and the development and
21 strengthening of specialized services;

22 (j) Enhancement of mechanisms for sharing public information and
23 collaboration with government agencies, nongovernment organizations, and other
24 stakeholders concerned, including the provision of extension services for disaster
25 planning, preparation, and mitigation, among others;

26 (k) Development and use of communication strategies to ensure effective
27 dissemination of relevant information and formulation of appropriate disaster
28 response and interventions;

29 (l) Strengthening of the PHIVOLCS Human Resource Development Program
30 (HRDP), which shall include the following:

31 (i) The formulation of a new salary scale for PHIVOLCS personnel by
32 the Department of Budget and Management (DBM) in consonance with

1 Republic Act No. 8439, as amended, otherwise known as the "Magna Carta
2 for Scientists, Engineers, Researchers and other Science and Technology
3 Personnel in Government" with a corresponding increase in the base pay,
4 allowances and other benefits;

5 (ii) An additional incentive to be known as the "Personnel Retention
6 Incentive", which shall be provided to qualified PHIVOLCS personnel:
7 *Provided, That* the amounts to be provided shall be determined by PHIVOLCS
8 in consultation with DBM and shall not, in any case, exceed twenty percent
9 (20%) of the monthly basic salary of the PHILVOLCS personnel concerned;
10 and

11 (iii) An education and training program to be developed by the
12 PHIVOLCS, in coordination with the DOST, the Commission on Higher
13 Education and higher education institutions, which shall include, but not
14 limited to, the following:

- 15 1. Scholarship programs for qualified undergraduate and
16 graduate studies in volcanology, seismology, and other related fields;
- 17 2. Specialized training programs for qualified individuals
18 engaged in volcanology, seismology, and other related fields; and
- 19 3. Human resources upgrading and capability enhancement
20 with regional and international organizations; and

21 (iv) Development of regional and international cooperation programs
22 with relevant regional and international bodies and government institutions
23 to complement the national effort for modernization; and

24 (m) Complementation and capacity-building of experts in the field of
25 volcanology and seismology, including the formulation and implementation of
26 continuing professional learning programs.

27 *Sec. 9. PHIVOLCS Modernization Fund.* – The PHIVOLCS Modernization Fund is
28 hereby created to be used exclusively for the PHIVOLCS Modernization Program, which
29 shall be sourced from the following:

30 (a) The amount of five billion pesos (P5,000,000,000.00) to be taken from
31 the share of the National Government in the gross income of the Bases Conversion
32 and Development Authority (BCDA). For two (2) years after the effectivity of this

1 Act, the amount of two billion five hundred million pesos (P2,500,000,000.00) per
2 year shall be released to the PHIVOLCS. The entire amount of five billion pesos
3 (P5,000,000,000.00), including any interest income thereon, shall be used
4 exclusively for capital outlay;

5 (b) Local or foreign donations, grants, gifts, endowments, legacies and
6 bequests made in support of the purpose and objectives of this Act; and

7 (c) Local or foreign loans contracted for the purpose of PHIVOLCS
8 modernization: *Provided*, That the Secretary of Science and Technology shall be
9 authorized to enter into loan agreements only after securing prior approval from
10 the National Economic Development Authority and the Department of Finance.

11 The PHIVOLCS Modernization Fund shall be administered by the Executive
12 Director in accordance with existing government budgeting, accounting and auditing
13 laws, rules and regulations.

14 Sec. 10. *Period of Implementation.* – The PHIVOLCS Modernization Program
15 shall be implemented for an initial period of three (3) years: *Provided*, That payments
16 for multi-year contract obligations incurred under this Act may extend beyond this
17 period: *Provided, further*, That PHIVOLCS shall continue to modernize and constantly
18 update its operational capabilities.

19 Sec. 11. *Annual Report.* – The Executive Director of the PHIVOLCS shall prepare
20 an annual report on the status of the implementation of the PHIVOLCS Modernization
21 Program which shall be submitted, through the Secretary of Science and Technology,
22 to the President and the Chairpersons of the Committee on Science and Technology
23 of the Senate and the House of Representatives not later than June 30 of the
24 succeeding year.

25 Sec. 12. *Procurement of Scientific and Technical Materials, Equipment, and*
26 *Services.* – The PHIVOLCS shall undertake the procurement of scientific and technical
27 materials, equipment, and services in the most expeditious manner, and adopt the
28 appropriate method of procurement based on its identified needs and requirements,
29 subject to the relevant provisions of Republic Act No. 9184, otherwise known as the
30 "Government Procurement Reform Act" and its Implementing Rules and Regulations
31 (IRR).

1 Sec. 13. *Exemption from Duties and Taxes.* – Importation and consignments
2 of scientific and technical materials and equipment by the PHIVOLCS shall be exempt
3 from all custom duties and taxes.

4 The donations, grants, gifts, endowments, legacies, and contributions used
5 actually, directly and exclusively for the PHIVOLCS Modernization Program shall be
6 exempt from donor's tax and shall be deductible from the gross income of the donor
7 for income tax purposes in accordance with the National Internal Revenue Code of
8 1997, as amended.

9 Sec. 14. *Simplification of Import Documentation Requirements.* – The
10 documentary requirements for releasing consignments of equipment sent to the
11 PHIVOLCS by international collaborative research partners shall be simplified to allow
12 for the prompt identification and release of the consigned equipment: *Provided, That*
13 PHIVOLCS shall, if necessary, lodge to the (BOC) without fee, the required
14 documentation and declaration for all consigned equipment by or on behalf of
15 international collaborative research partners within a period to be specified by the
16 BOC: *Provided, further, That* imported materials and equipment to be used for
17 monitoring volcanic and seismological activities shall be immediately released by the
18 Bureau of Customs (BOC) when there is an ongoing volcanic eruption.

19 Sec. 15. *Collaboration with Local Government Units.* – The PHILVOLCS shall
20 develop mechanisms to enhance collaboration with local government units especially
21 in the following areas:

22 (a) Development of linkages with the local decision makers, local news
23 outlets, disaster and emergency response units, and the local community
24 particularly in the formulation of localized disaster risk reduction and management
25 plans, emergency response procedures and emergency communication strategies;

26 (b) Dissemination of accurate and up-to-date information before, during and
27 after volcanic eruptions and other seismic events;

28 (c) Conduct of outreach programs to increase awareness and understanding
29 of the nature of the geotectonic hazards, the risks imposed by such hazards to
30 personal safety and property, and the steps to be undertaken to reduce the such
31 risks; and

(d) Review and evaluation of local plans, programs and projects, including the identification of gaps in the established systems for monitoring, early warning, and forecasting volcanic and other seismic activities.

Sec 16. *Appropriations.* — The amount necessary to carry out the provisions of this Act shall be initially charged from the appropriations of PHIVOLCS for the current fiscal year. Thereafter, the amount needed for the effective implementation of this Act shall be included in the annual General Appropriations Act.

The amount to be appropriated in the annual General Appropriations Act may be augmented by grants, donations, bequests, or contributions from domestic or foreign sources: *Provided,* That the acceptance of grants, donations, bequests, or contributions from foreign governments shall be subject to the approval of the President of the Philippines upon the recommendation of the Secretaries of Science and Technology, Finance, and Foreign Affairs.

Sec. 17. *Implementing Rules and Regulations.* — Within ninety (90) days from the effectivity of this Act, the DOST, PHIVOLCS and DBM shall promulgate the necessary rules and regulations for the effective implementation of this Act.

Sec. 18. *Separability Clause.* — The provisions of this Act are hereby declared to be separable. If any provision of this Act shall be held unconstitutional, the remainder of the Act not otherwise affected thereby shall remain in full force and effect.

Sec. 19. *Repealing Clause.* — All laws, executive orders, rules and regulations, or parts thereof, inconsistent herewith are hereby repealed, amended or modified accordingly.

Sec. 20. *Effectivity Clause.* — This Act shall take effect within fifteen (15) days from its publication in at least two (2) national newspapers of general circulation or in the *Official Gazette*.

Approved,