

**Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila**

**NINETEENTH CONGRESS
First Regular Session**

House Bill No. 7599



Introduced by Representative Richard I. Gomez

EXPLANATORY NOTE

Since the creation of the Commission of Volcanology in 1952, under Republic Act No. 766, the Philippine Institute of Volcanology and Seismology (PHIVOLCS) has gone through several reorganizations. Through Executive Order No. 784, series of 1982 the group was transferred to the National Science and Technology Authority (now the Department of Science and Technology) and through Executive Order 984, series of 1984, seismology was subsequently diverged from the Philippine Atmospheric Geophysical and Astronomical Services Administration. From a non-staffed Commission, PHIVOLCS has emerged into an Institute that is more responsive and attuned to the vision of the Philippine government for a resilient community.

It is common knowledge that the Philippines sits on the Pacific Ring of Fire and hosts 24 active volcanoes, 27 potentially active volcanoes and numerous active faults and trenches capable of producing large magnitude earthquakes that can result in disasters and disrupt life in communities.

Additionally, at least 60% of the country's total land area is exposed to multiple hazards, and 74% of the population is susceptible to their impacts. Sixty-six out of 81 provinces in the Philippines are coastal, and are therefore, exposed to tsunami threats. The total coastal population in the Philippines based on the 2015 PSA data is 64.7 million, or almost 61.6 % of the total population.

With the given statistics, it is no wonder that the World Risk Index for 2022 ranks the Philippines on top of 193 countries evaluated. This puts serious pressure on agencies such as PHIVOLCS to deliver accurate, swift, timely information, warning, and disaster monitoring, specifically on volcano, earthquake and tsunami events.

Given our country's natural vulnerability, as demonstrated by most recent disaster events in Taal Volcano, the earthquakes in Ormoc, Leyte, Bohol Province, among others, there is a need to augment and enhance the monitoring and warning capabilities of PHIVOLCS.

Of the 24 active volcanoes, only 10 are currently being monitored. And out of the 10 monitored volcanoes, only two are instrumented with all required station types.

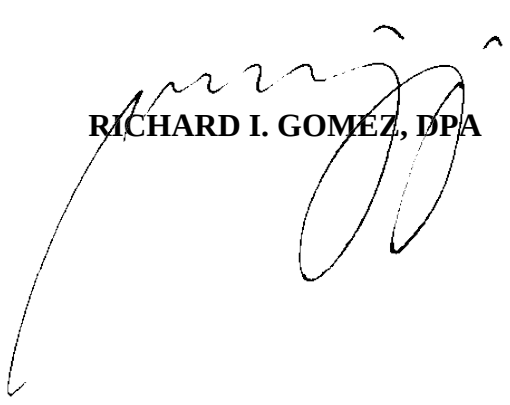
PHIVOLCS has also mapped numerous active faults transecting densely populated cities, and in the last ten years, these faults have generated a total of seven (7) major earthquakes and several strong earthquakes. Many of these earthquakes are damaging. There is, therefore, a need to increase the density of the Institute's seismic stations to better understand future earthquake occurrences.

Since 1952, PHIVOLCS has evolved from a simple monitoring and warning agency to an Institute that also conducts hazard mapping, as well as other specialized research and development (R&D) activities. This includes, most recently, the employment of PHIVOLCS' HazardHunterPH by commercial enterprises such as banks, as guide in properly locating business operations. The rapid growth in demand for such services has put pressure in the institutes human resource management.

Furthermore, the National Government is also requesting PHIVOLCS to conduct assessments on various government projects using in-house developed technologies. These additional demands stretch the capacities of the institute's already lean staff with research, mapping and hazard monitoring capabilities. PHIVOLCS has adapted by hiring temporary staff to handle technical support services, but unfortunately this is not sustainable. Without security of tenure, there is always the possibility that these temporarily-hired staff will leave the institute, and with them, their acquired skills.

As PHIVOLCS expertise remains at the forefront in the forecast and determination of risks related to volcano, earthquake, tsunamis and its related hazards, there is therefore an urgent need to augment the number of plantilla positions of PHIVOLCS in order to meet the growing demands of its stakeholders.

In view of the foregoing, the enactment of this bill is urgently sought.



RICHARD I. GOMEZ, DPA

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

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

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

SEC. 2. *Declaration of Policy.* – It is the policy of the State to utilize scientific and technical knowledge and information as an effective instrument to ensure the safety, well-being and economic security of the people; to safeguard the environment; and to promote national progress and sustainable socio-economic development through various applications of geology, geophysics, geodetic engineering and allied sciences. The State also recognizes the need to strengthen the capability of government personnel tasked to monitor volcanic and seismological activities and other related services and information to the public. Towards this end, the State shall undertake the modernization of the Philippine Institute of Volcanology and Seismology (PHIVOLCS) to improve its technological operational capacity, strengthen its role as the premier national volcano and earthquake monitoring agency and to attain its vision as a center of excellence for related information services.

SEC. 3. *Objectives.* – Pursuant to the foregoing policy, the PHIVOLCS Modernization Program shall be implemented in accordance with the following objectives:

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

- (b) To enhance research and development capabilities by adopting a rationalized and integrated approach with focus on the improvement of basic operations and specialized services;
- (c) To integrate disaster risk reduction and management in the sustainable socio-economic development planning at the national and local levels in coordination with appropriate government agencies and other entities;
- (d) To strengthen linkages and cooperation at the national level among the various providers and users of geological, seismological and other services as well as to provide for the appropriate mechanisms for this purpose;
- (e) To establish and enhance volcanic and seismological activity monitoring service centers in strategic areas in the country to broaden the agency base for the delivery of service in the countryside;
- (f) To strengthen a technology-based data center consistent with international standards to make information available to those involved, whether from the government or private sector in Disaster Risk Reduction and Management Plans, among others;
- (g) To enhance public information, education and advocacy on geological activities, as well as their impacts, risks and vulnerability;
- (h) To facilitate the appropriate appreciation and delivery of information, products and services to decision makers, media, other users and the general public; and
- (i) To provide a more competitive base pay and other benefits for its personnel in order to promote professionalism and commitment to the service.

SEC. 4. *Definition of Terms.* – the following terms are defined as follows:

- (1) Seismology – the scientific study of the sudden, violent movements of the earth connected with earthquakes;
- (2) Tsunami - a series of large waves of extremely long wavelength and period usually generated by a violent, impulsive undersea disturbance or activity near the coast or in the ocean; and
- (3) Volcanology – is the study of volcanoes, lava, magma, ash or tephra fall and related geological, geophysical and geochemical phenomena.

SEC. 5. *Mandate.* – The PHIVOLCS shall hereby be mandated to perform the following:

- a. Predict the occurrence of volcanic eruptions and earthquakes, and their related geotectonic phenomena;

- b. Determine how volcanic eruptions and earthquakes shall occur and areas likely to be affected;
- c. Mitigate hazards of volcanic activities through appropriate detection, forecast and warning system;
- d. Provide appropriate volcano, earthquake and tsunami products and services for disaster preparedness;
- e. Coordinate with the National Disaster Risk Reduction and Management Council (NDRRMC), the Department of National Defense (DND), and other relevant agencies on all matters involving volcano, earthquake and tsunamic events;
- f. Coordinate and support Local Government Units (LGUs) in determining localized hazard maps for volcano, earthquake and tsunami; and
- g. Provide timely, quality and socially inclusive information and services for warning, disaster preparedness and mitigation.

SEC. 6. *Organizational Structure.*-- The PHIVOLCS shall be an attached agency of the Department of Science and Technology (DOST) for purposes of policy and program coordination, to ensure alignment in national science and technology policies and priorities.

It shall be headed by an Executive Director V with the rank and compensation of a Department Undersecretary who shall be appointed by the President upon recommendation by the Secretary of the DOST.

The Executive Director V shall be assisted by three (3) Deputy Executive Director V for Operations Services; Research and Development and Science and Technology (S&T) Services; and Administration, Finance and General Services, all with the rank and compensation of a Department Assistant Secretary to be appointed by the President.

SEC. 7. *Qualifications.* – No person shall be appointed as Executive Director V unless that person is a natural-born citizen and a resident of the Philippines, of good moral character, has an advanced degree in geology, geodetic engineering, volcanology, physics, and other related fields and possesses demonstrated competence and expertise by way of at least five (5) years of experience in volcanology, geophysics, and or allied sciences. *Provided*, That the Executive Director V and the three (3) Deputy Executive Director V shall be career executive officers.

SEC. 8. *Components of Modernization.* – The PHIVOLCS modernization shall have the following components:

- (a) *Upgrading and maintenance of all PHIVOLCS physical resources and operational techniques.*-- All physical resources and operational techniques of PHIVOLCS must be considered for upgrade, in favor of state-of-the-art instruments, equipment, facilities, systems, and operational techniques, with emphasis on volcano, earthquake and tsunami monitoring and warning system; *Provided*, That prior to such acquisition and/or upgrade, an inventory of existing government and private, volcanic and seismological instruments nationwide shall be undertaken: *Provided, further*, that the acquisition of new instruments,

equipment and systems shall be harmonized with the phase-out of uneconomical and obsolete instruments, equipment and systems in the PHIVOLCS inventory;

(b) *Sustained adoption of continually evolving technologies for eruption early warning.* -- The national government shall keep abreast with the latest in S&T to ensure public safety through investments in state-of-the-art systems to customized off-the-shelf instruments;

(c) *Development and maintenance of a national Volcano Monitoring network infrastructure.* – PHIVOLCS shall develop and maintain a technologically advanced monitoring system for all active volcanoes of the Philippines, to ensure early warning of volcanic activity, even for volcanoes with long periods of dormancy;

(d) *Development and maintenance of a national Earthquake and Tsunami Monitoring and Information System.* – PHIVOLCS shall establish, operate and maintain an advanced infrastructure for earthquake and tsunami monitoring throughout the Philippines operating under high performance standards, with the ability to gather critical technical data, and effectively provides information products and services to meet the needs of the Philippine government and the public;

(e) *Long-term protection/ conservation of built structures.* -- PHIVOLCS shall establish baseline data on earthquake shaking at ground sites of buildings and critical lifeline structures, especially in urban areas and areas near major active fault.

(g) *Establishment of the PHIVOLCS headquarters building.* PHIVOLCS shall oversee the acquisition of land, design and construct the PHIVOLCS headquarters to house the Data Receiving/ Operation Centers for real-time volcano, earthquake and tsunami monitoring. This shall ensure stability and protection of government investments on scientific, technical equipment and research laboratories.

(i) *Enhancement of public information and linkages with Local Government Units (LGUs) and other stakeholders.* -This shall include continuous sharing of information to LGUs and other stakeholders that help in the disaster planning, preparation, disaster mitigation, among others;

(j) *Enhancement of volcanic, earthquake and tsunami public information and linkages with Local Government Units (LGUs) and other stakeholders.* – PHIVOLCS shall develop a communication strategy to reach and connect with the general public LGUs and other relevant stakeholders, using plain and applicable local language, nontechnical terms and familiar graphical presentations, in combination with science-based information that will ensure the delivery of accurate, up-to-date and timely earthquake, tsunami, and volcano-related information to create greater public awareness and draw appropriate response for disaster risk reduction: Provided, that PHIVOLCS shall partner with the Komisyon sa Wikang Filipino (KWF), various Sentro ng Wika

at Kultura, Philippine Commission on Women, and other rights-based organizations for the development or enhancement of socially-inclusive products. PHIVOLCS shall collaborate with both public and private organizations to effectively disseminate data and products.

(k) *Strengthening of the Human Resource Development Program (HRDP).*

- The HRDP of PHIVOLCS shall continue to be aligned with the strategic goals of the Institute. This shall ensure that personnel are provided equal opportunities for self-improvement to be competent, motivated to work and rewarded.

Complementation and capacity-building of a wide-range of experts in volcanology and seismology and to efficiently develop, operate and maintain advanced monitoring systems and distill accurate volcano, earthquake and tsunami information for public guidance. Support to continued professional learning will further ensure skills development and motivation that will translate to better S&T services.

SEC. 9. *Whole-of-Government Approach.* – This Act shall be implemented using a "whole of government approach," to ensure proper coordination of various aspects in disaster resilience risk mitigation, and response across all areas of government; namely, local governance, education, communication, science and technology, among others.

SEC. 10. *Collaboration and linkages with Local Government Units (LGUs).* – As part of the institutional modernization of PHIVOLCS, the roles of the local government shall be enhanced to cover the following areas:

(a) *Coordination in land use zoning.* -- PHIVOLCS and LGUs shall coordinate in appropriately zoning of areas found to be within fault lines or high risk of volcanic and earthquake hazard;

(b) *Information Dissemination.* -- PHIVOLCS shall work closely with the national and local disaster agencies in crafting appropriate information messages and in planning information dissemination communication channels to ensure accurate, timely and pervasive reach to localized target audiences;

(c) *Awareness and Promotion.* – LGUs and PHIVOLCS shall partner in creating outreach communication programs designed to promote public awareness of the nature of the geotectonic hazards, the risks to personal safety and property, and appropriate actions in personal disaster resilience, risk reduction and response during actual volcano, earthquake and tsunami events; and

(d) *Technical Review.* -- The LGUs shall contribute in reviewing localized research, information exchange and coordination of local projects to ensure disaster resilience and readiness;

SEC. 11. *Components of the Human Resource Development Program (HRDP).*
– The HDRP program shall include the following components shall include the following:

(a) *New Salary Scale for PHIVOLCS Personnel.* – The Department of Budget and Management (DBM) shall develop a new salary scale for PHIVOLCS personnel in consonance with Republic Act No. 8439, as amended otherwise known as the “Magna Carta for Scientists, Engineers, Researchers and other Science and Technology Personnel in Government,” with a corresponding increase in the base pay, allowances and other benefits;

(b) PHIVOLCS shall reassess its human resource requirements resulting from organizational changes pursuant to this Act, in consultation with DBM.

(c) *PHIVOLCS Personnel Retention Incentive.* – An additional incentive to be known as the “Personnel Retention Incentive” shall be provided to qualified PHIVOLCS personnel, to be determined by PHIVOLCS in consultation with DBM in an amount not exceeding twenty percent (20%) of the monthly basic salary subject to the implementing rules and regulations (IRR) which shall be hereinafter formulated;

(d) *Scholarship Program.* – Not later than three (3) years from the enactment of this Act, scholarships shall be provided for undergraduate and graduate studies in volcano- and seismology-related fields as well as for specialized training programs, in coordination with the DOST, Commission on Higher Education (CHED) and Higher Education Institutions (HEIs). Cooperation on human resources upgrading and capability enhancement with regional and international organizations shall also be undertaken; and

(d) *Development of Regional and International Cooperation Program.* – This shall entail the development of appropriate collaborative arrangements with relevant regional and international bodies and government institutions to complement the national effort for modernization.

SEC. 12. *Role in Disaster Resilience, Preparedness, Mitigation, Actual Event Management and Post-event.* – The institutional modernization of PHIVOLCS shall fortify the role of PHIVOLCS in various aspects of disaster resilience, risk reduction and management of volcano, earthquake and tsunami events. This shall include, but shall not be limited to:

1) Enhancing the availability, dissemination and appreciation of science-based information to target stakeholders to effect appropriate response actions before, during and post occurrences of said hazards. There shall be provision for:

(a) Fully equipped and well-staffed learning / training centers that shall serve as platforms for planning, implementing, monitoring, and evaluating capacity development programs for various stakeholders regarding mitigation and preparedness for volcanic eruptions, earthquakes, and tsunami-related hazards;

(b) A knowledge management system aimed at producing information that are easily absorbed, recalled and applied by the public at large, *Provided, that* information are expressed in manners that are culturally relevant, gender-responsive, and disability-inclusive.;

(c) A multi-channel and multi-directional communication strategy and standardized procedures that shall ensure access to and effective dissemination of useful information on volcano, earthquake and tsunami disaster preparedness, risk reduction, and emergency response to intended stakeholders and the public; and

2) Close operational coordination with National Disaster Risk Reduction and Management Council (NDRRMC), Department of National Defense (DND) and other relevant government agencies, including the following, but not limited to, the following aspects:

- (a) Research, monitoring, data and overall advisory function with regard to all matters on volcano, earthquake and tsunami;
- (b) Advisory assistance in disaster resilience planning; and
- (c) Advisory assistance in forecasting and monitoring disaster events involving volcano, earthquake and tsunami.

SEC. 13. *Formulation and Submission of the PHIVOLCS Modernization Program.* – The Executive Director of the PHIVOLCS in coordination with the Secretary of the DBM and the Director-General of the National Economic and Development Authority (NEDA), shall formulate the PHIVOLCS Modernization Program and oversee its implementation based on the policy objectives provided in this Act.

The PHIVOLCS Modernization Program shall indicate the following items, among others:

- (a) PHIVOLCS requirements in terms of personnel, equipment and facilities during the various stages of modernization;
- (b) The modernization projects, which shall indicate the equipment and technology acquisitions, including major construction or upgrade of facility and the particular objective and component to which such intended acquisition, construction and upgrading belongs to; and
- (c) The priorities, schedules and estimated cost of each modernization project.

SEC. 14. *Period of Implementation.* -- The modernization program under this Act shall be implemented for an initial period of three (3) years: *Provided, that* payments for multi-year contract obligations incurred under this Act may extend beyond this period. *Provided, further,* that PHIVOLCS shall continue to modernize and constantly update its operational capabilities to keep pace with best international practices.

SEC. 15. *PHIVOLCS Modernization Fund.* – There is hereby created the PHIVOLCS Modernization Fund to be used exclusively for the PHIVOLCS Modernization Program, which shall be sourced from the following:

(a) The amount of five billion pesos (P5,000,000,000.00) to be taken from the share of the National Government in the gross income of the Bases Conversion and Development Authority (BCDA). For two (2) years after the effectivity of this Act, an amount of two billion five hundred million pesos (P2,500,000,000.00) per year shall be released to the PHIVOLCS. The entire amount of five billion pesos (P5,000,000,000.00), including any interest income thereon, shall be used exclusively for capital outlay.

(b) Loans, grants, bequests, and donations whether from local or foreign sources. The Secretary of the DOST with the approval of the NEDA and subsequently the Department of Finance (DOF) is hereby granted the authority to enter into loan agreements with foreign financial institutions.

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

SEC. 16. *Annual Report.* – The Executive Director of the PHIVOLCS shall prepare an annual report on the status of the implementation of the PHIVOLCS Modernization Program which shall be submitted through the DOST Secretary, to the President and to the Chairpersons of the Committee on Science and Technology of the Senate and the House of Representatives not later than June 30 of the succeeding year.

SEC. 17. *Tax Exemptions.* - Donations, grants, gifts, endowments, legacies, and contributions used actually, directly and exclusively for the purpose of the PHIVOLCS shall be exempt from donor's tax and the same shall be considered as allowable deduction from gross income for purposes of computing the taxable income of the donor, in accordance with Sec. 34 (H)(2)(a) of the National Internal Revenue Code of 1997, as amended. Likewise, such other transfers of ownership and/or possession of real or personal properties of all kinds shall be exempt from all taxes.

SEC. 18. *Procurement of Scientific and Technical Materials, Equipment, and Services.* - The PHIVOLCS shall undertake the procurement of scientific and technical materials, equipment, and services in its operation and administration, in the most expeditious manner, and adopt the most suitable or appropriate method of procurement that it deems fit based on its identified needs and requirements depending on the existing conditions and requirements that justify the use of a particular alternative modality provided for by Republic Act No. 9184, otherwise known as the "Government Procurement Reform Act" and its Implementing Rules and Regulations (IRR).

SEC. 19. *Exemption from Import Duties, Taxes and Restrictions.* - Importation and consignments of equipment shall benefit from:

- (a) Exemption from all duties and taxes;
- (b) Waiver of economic prohibitions and restrictions except for categories of special goods and equipment that may be indicated by the PHIVOLCS;
- (c) Clearance without regards to the country of origin or the country from which the goods have arrived, subject to monitoring for reasons of public health and security; and
- (d) Immediate release of urgent, necessary monitoring equipment when there is an ongoing volcanic eruption.

Sec. 20. Simplification of Documentation Requirements. -

- (a) Consignments of equipment sent by international collaborative research partners shall be cleared or released on the basis of a simplified equipment declaration providing the minimum information necessary for the Bureau of Customs to identify the equipment and object, when deemed necessary, to completion of a more complete declaration within a specified period; and
- (b) The requirements for the declaration for all imports of equipment by or on behalf of international collaborative research partners and any supporting documents relating to it, release and clearance shall be simplified and lodged without fee.

SEC. 21. *Appropriations.* – The amount necessary to carry out the implementation of this Act shall be initially charged against the current fiscal year appropriations of the DOST – PHIVOLCS. Thereafter, the amount needed for the continued implementation of the modernization program, shall be included in the annual General Appropriations Act.

SEC. 22. *Implementing Rules and Regulations (IRR).* – Within ninety (90) days from the effectivity of this Act, the PHIVOLCS shall issue the IRR for the effective implementation of this Act in consultation with relevant stakeholders.

SEC. 23. *Separability Clause.* – If any provision or part of this Act is declared invalid or unconstitutional, the other provisions hereof which are not affected thereby shall continue to be in full force and effect.

SEC. 24. *Repealing Clause.* – All laws, orders, proclamations, rules and regulations or parts thereof which are inconsistent with the provisions of this Act are hereby repealed or modified accordingly.

SEC. 25. *Effectivity Clause.* – This Act shall take effect fifteen (15) days after its publication in one (1) national newspaper of general circulation.

Approved,

