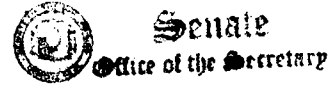


EIGHTEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



20 MAR 10 P 4 :10

SENATE
S. No. 1409

RECEIVED BY: 

Introduced by Senator Francis "Tol" N. Tolentino

AN ACT
INSTITUTIONALIZING SPECIAL MECHANISMS FOR ACTIVE VOLCANO
AREAS AND MANDATING LOCAL GOVERNMENT UNITS TO DESIGNATE
VOLCANIC DISASTER EMERGENCY AREAS, APPROPRIATING FUNDS
THEREFOR AND FOR OTHER PURPOSES

EXPLANATORY NOTE

The Philippines belongs to the Pacific Ring of Fire and sits between the boundaries of two tectonic plates—the Philippine Sea Plate and the Eurasian Plate—among other several microplates, leaving it vulnerable to volcanism and earthquake activity. At present, there are twenty-four (24) volcanoes across the country classified by the Philippine Institute of Volcanology and Seismology (PHIVOLCS) as active within the last 600 years while more than 300 volcanoes are classified as inactive.

The history of volcanic eruptions in the Philippines is long and rich, with eruptions of active volcanoes dating back to as early as the 1600s. Mt. Pinatubo's eruption in 1991 is considered one of the most cataclysmic modern day volcanic eruptions in the country, killing more than 700 people and costing as much as Php36 billion in damages. Meanwhile, Mayon Volcano, dubbed to be the most active among those monitored by PHIVOLCS, violently erupted last 2018 and continues to spurt smoke and fire to date. In January 2020, Taal Volcano's seismic activities sent Luzon reeling after surrounding provinces experienced strong tremors, heavy ash fall and hard rain of rock particles. Economic analysts have already predicted that the Taal

Volcano eruption would risk the country's Gross Domestic Product (GDP) growth, pushing the inflation rate to 3%.

The cost of a volcanic eruption is steep, it not only results in property damage and stalled public utilities, businesses or industries, but also adversely affects the tourism and agriculture sectors. In the social development spectrum, health concerns, disrupted education and internal displacement are also some of the resulting issues.

Yet despite the reality that volcanic eruptions are an ever looming hazard, given that their occurrence and magnitude are hard to predict, the Philippines still does not have a standard protocol for volcanic eruptions. The Department of Interior and Local Government (DILG) has created a manual (Operation Listo) for Local Government Units (LGUs) responding to typhoons and other weather systems, however, this does not provide emergency operations that are responsive to the needs of the provinces uniquely affected by volcanic unrest.

In other countries such as Japan, Indonesia and the United States, comprehensive volcanic eruption plans, which covers detailed warning systems, public education, convening of stakeholders and identification of safe zones, are in place. Japan in particular, has a specific legislation called the "Act on Special Measures Against Active Volcanoes" (Act no. 61 of 1948) for their nation-wide volcano eruption protocol, identifying specific operations to be carried out. It also has a Volcanic Alert Levels system, which provides the areas that must be warned and the responses that should be taken by stakeholders for the volcano's current state of unrest. Prior to this, they follow a "Disaster prevention countermeasures corresponding to specific volcanic information" scheme wherein before a volcanic anomaly occurs, stakeholders meet and make projections of eruption scenarios based on the volcano's past history and hazardous areas which will serve as basis for their disaster response.

Meanwhile in the Philippines, the only existing volcanic eruption protocol is that of Albay's. Albay has focused on data gathering and management of information during previous Mayon Volcano eruption operations to identify evacuation centers and much needed relief goods; they also conduct regular volcanic eruption drills to simulate different scenarios in barangays. More importantly, LGUs in Albay maintain

active engagement with the affected communities and consult experts such as PHIVOLCS and the Department of Science and Technology (DOST).

Now therefore, to strengthen the emergency response system of LGUs during volcanic unrest, this bill aims to provide the following:

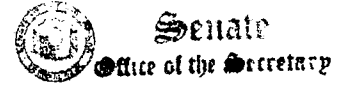
- A) The creation of a standardized framework for volcanic eruption monitoring, warning and mitigation through special protocols drawn from international practice;
- B) The designation of volcanic disaster emergency areas by LGUs, wherein each hazard area has a corresponding response action plan; and
- C) The identification of specific activities and operations to be carried out by different stakeholders.

Ultimately, LGUs have the technical knowledge of the topography, industries, and demographics of their jurisdictions. They also possess the expertise to determine the very needs of their constituents, as well as the threats to their security following a volcanic eruption. For this reason, LGUs should be given proper guidance in mitigating such risks and increasing efficiency of disaster operations. Considering the foregoing, the immediate enactment of this bill is respectfully requested.



FRANCIS "TOL" N. TOLENTINO

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Introduced by Senator Francis "Tol" N. Tolentino

1 **AN ACT**
2 **INSTITUTIONALIZING SPECIAL MECHANISMS FOR ACTIVE VOLCANO**
3 **AREAS AND MANDATING LOCAL GOVERNMENT UNITS TO DESIGNATE**
4 **VOLCANIC DISASTER EMERGENCY AREAS, APPROPRIATING FUNDS**
5 **THEREFOR AND FOR OTHER PURPOSES**
6

7 Be it enacted by the Senate and House of Representatives of the Philippines in
8 Congress assembled:
9

10
11 Section 1. *Short Title.* This Act shall be known as the "Special Mechanisms for
12 Active Volcano Areas Act."

13 Sec. 2. *State Policy.* The State recognizes the vulnerability of the country to
14 natural disasters, such as volcanic eruptions, and the socio-economic issues that arise
15 during such calamities.

16 The State likewise affirms the importance of Local Government Units (LGUs) in
17 disaster preparedness, mitigation, and response, having the most knowledge
18 regarding the terrain, routes, residents and other vital information for disaster
19 management within their jurisdiction.

20 As such, it is hereby declared the policy of the State to foster a spirit of
21 cooperation and shared responsibility among national government agencies and local
22 government units in disaster preparedness and management.

23 Sec. 3. *Definition of Terms.* For purposes of the Act, the following terms shall
24 mean:

- 1 a) Alert Levels - A system that defines the current status of a volcano which is
2 used as a guide to making the appropriate response. The levels usually range
3 from level 1 to 5.
- 4 b) Volcanic Disaster Emergency Areas - Areas at immediate risk of serious damage
5 or destruction from volcanic activity.
- 6 c) Hazard Zones - Areas at risk of damage from volcanic activity.
- 7 d) Safe Refuge Zones - Areas that will not be seriously affected by volcanic activity
8 which may be turned into evacuation centers.

9 *Sec. 4. Scope and Limitations.* This Act shall be limited in scope, application
10 and effectivity to disaster monitoring, mitigation, and emergency response
11 mechanisms for active volcanoes in the country.

12 *Sec. 5. National Volcano Early Warning and Monitoring System.* A system, to
13 be known as the "National Volcano Early Warning and Monitoring System" shall be
14 established to monitor, warn, and protect citizens of the Philippines from undue and
15 avoidable harm from volcanic activity.

16 A) Communication of Alert Levels - Alert levels issued by the Philippine Institute
17 of Volcanology and Seismology (PHIVOLCS) shall require mandatory action by
18 stakeholders at certain alert levels, to increase the effectiveness of disaster
19 mitigation by both the government and communities. Likewise, the LGUs
20 affected shall implement policies, communication strategies and actions for
21 disaster preparedness are tied to each level. LGUs shall simplify translate the
22 alert levels and the corresponding mandatory actions to the language or dialect
23 that can be understood by their constituents.

24 B) Modernization Activities - Modernization activities shall include the
25 comprehensive application of emerging technologies, real time continuous
26 Global Positioning System receivers, airborne radars, acoustic sensors,
27 spectrometry to measure gas emissions, and other such relevant technologies.

28 A grants program to support advanced research in volcano monitoring
29 science and technology shall be established.

30 *Sec. 6. Designation of Volcanic Disaster Emergency Areas.* In coordination with
31 the National Disaster Risk Reduction and Management Council (NDRRMC), PHIVOLCS
32 and other concerned agencies, the LGUs vulnerable to volcanic unrest shall jointly

1 designate the primary Volcanic Disaster Emergency Areas where rescue and relief
2 operations shall be carried out. A comprehensive mapping of hazard zones, including
3 the identification of safe refuge zones, evacuation routes and assembly points shall
4 also be developed. Planning for the inter-province traffic control, the evacuation
5 transport and shelter accommodation of persons and animals shall also be established.

6 Pursuant to the designation of emergency areas, the following infrastructures
7 and establishments may be used by LGUs:

8 A) Public Infrastructures - The use of gymnasiums, convention centers, multi-
9 purpose halls, covered courts, government warehouses, and other similar
10 spacious structures as evacuation centers during emergencies and disasters.

11 B) Commercial Establishments - The utilization of private or commercial buildings,
12 such as but not limited to schools, shopping malls, restaurants, warehouses, as
13 evacuation centers or safe zones, provided that just compensation in the form
14 of rentals, from the local government unit or the national government in case
15 of incapacity of the former, for the use of such private institutions shall be made
16 after such emergency utilization.

17 *Sec. 7. Special Measures.* The following measures shall be adopted to
18 standardize nation-wide protocol for active volcano eruptions:

19 A) Survey and Inventory - The LGUs concerned shall gather and collate an updated
20 census of the population in each hazard zone; a survey of utilities and public
21 infrastructure affected; and a register of valuable real and personal property
22 therein. Such surveys and inventories shall be updated from time to time to
23 ensure smooth evacuation and rehabilitation operations.

24 B) Stakeholder Responsibilities - For the prompt and efficient execution of
25 evacuation and rescue operations, aid delivery, and rehabilitation efforts, LGUs
26 shall determine vital stakeholders that could be called upon during volcanic
27 unrest. Specific activities and operations for each stakeholder in the different
28 hazard zones shall be designated by the LGUs, in coordination with the
29 NDRRMC. More importantly, medical assistance and engineering services that
30 could be utilized shall also be identified.

1 The specific operations of each stakeholder shall be laid out and
2 communicated to the public in order to facilitate coordination regarding
3 evacuation, rescue and relief operations.

4 The sequence of the emergency and recovery activities that will be
5 executed during a threat and impact of a volcanic eruption shall be determined
6 by the LGUs in order to optimize resources and increase effectiveness of
7 response.

- 8 C) Permanent Public Awareness Campaign - A permanent public awareness
9 campaign on the hazards of volcanic eruptions and disaster risk reduction
10 procedures shall be designed and implemented by the LGUs concerned, taking
11 into account the special needs of different communities, such as the
12 marginalized, the indigenous peoples and persons with disabilities. Information
13 on volcanic risks and measures taken if the threat of eruption is present in the
14 area shall be simplified and made available in a language or dialect understood
15 by the citizens therein.

16 Teaching volcanic hazards as part of the regular school curriculum shall
17 be mandatory for provinces or municipalities directly affected by volcanic
18 eruptions and routine evacuation simulation drills or exercises shall be
19 conducted by the LGUs as often as practicable.

- 20 D) Ash Clean Up - Public utilities and live-saving facilities shall be prioritized in
21 clean-up operations by the Government, which includes, but is not limited to,
22 communication lines, power supply, water systems, medical facilities and road
23 networks. Public entry in areas not yet cleared from hazards by the LGU
24 authorities shall be restricted.

25 LGUs shall designate ash disposal pits and the separation of volcanic ash
26 from garbage shall be mandatory to prevent damage to collection vehicles and
27 filling up of regular landfills.

- 28 E) Zoning - For structures within the hazard area, repairs or rebuilding may start
29 upon the determination, by the proper local authorities, of the viability of the
30 area affected by the volcanic eruption. Pertinent zoning measures shall be
31 implemented to avoid cyclic evacuation and clearance operations, especially if
32 returning to the area is deemed extremely hazardous for human habitation.

1 F) Donations - LGUs, in coordination with their corresponding Provincial Disaster
2 Risk Reduction Management Offices, the Office of the Civil Defense/NDRRMC
3 and the Department of Social Welfare and Development, shall identify proper
4 organizations in their localities to receive, record, manage and distribute
5 donations for those affected by the volcanic unrest. Provided that a framework
6 for this purpose shall be created.

7 G) Consultations - LGUs shall regularly engage, coordinate and consult with
8 PHIVOLCS and the NDRRMC for relevant and timely transmission of information
9 on the current status of the active volcano/es in the area and the possible
10 attendant threats such seismic activities pose.

11 *Sec 8. Appropriations.* The amount necessary to carry out the provisions of this
12 Act, shall be charged against the current year's appropriation of the Disaster Risk
13 Reduction Management (DRRM) Fund and of other pertinent LGUs. Thereafter, such
14 amount as may be necessary for the continued implementation of this Act shall be
15 included in the Annual General Appropriations Act.

16 *Sec. 9. Implementing Rules and Regulations.* The PHIVOLCS, the DOST, the
17 NDRRMC and other concerned government agencies shall formulate and prescribe,
18 after public hearing and publication as required by law, the Implementing Rules and
19 Regulations in order to carry out the provisions of this Act within 90 days from its
20 effectivity.

21 *Sec. 10. Separability Clause.* If any provision of this Act shall be held
22 unconstitutional or invalid, the other provisions not otherwise affected shall remain in
23 full force and effect.

24 *Sec. 11. Repealing Clause.* All laws, decrees, executive orders, proclamations
25 and other executive issuances which are inconsistent with or contrary to the provisions
26 of this Act are hereby amended or repealed accordingly.

27 *Sec. 12. Effectivity Clause.* This Act shall take effect fifteen (15) days following
28 its complete publication in the Official Gazette or in two (2) national newspapers of
29 general circulation.

30 Approved,