



REPUBLIC OF THE PHILIPPINES
NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT COUNCIL

National Disaster Risk Reduction and Management Center, Camp Aguinaldo, Quezon City, Philippines

NDRRMC UPDATE

Update on Alert Status and Activity of Mayon, Taal, and Bulusan Volcanoes

Releasing Officer:


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DATE : 25 January 2020, 8:00 AM

Source: DOST-PHIVOLCS 25 January 2020, 08:00 AM

I. SITUATION OVERVIEW

A. ALERT STATUS OF MAYON VOLCANO

Mayon Volcano's seismic monitoring network **did not detect any volcanic earthquakes** during the 24-hour observation period. Moderate emission of white steam-laden plumes that crept downslope before drifting west-southwest and west-northwest was observed. Sulfur dioxide (SO₂) emission was measured at an average of 115 tonnes/day on 10 January 2020. Ground deformation data from Precise Leveling surveys obtained on 23 – 30 October 2019 indicate a slight deflation of the edifice relative to 16 – 25 July 2019. However, the volcano generally remains inflated relative to the early 2019 baseline level. This is consistent with recent electronic tilt data. Continuous GPS data also showed inflation of the edifice since February 2019.

Alert Level 2 currently prevails over Mayon Volcano. This means that Mayon is at a moderate level of unrest. DOST-PHIVOLCS reminds the public that sudden explosions, lava collapses, pyroclastic density currents or PDCs and ashfall can still occur and threaten areas in the upper to middle slopes of Mayon. DOST-PHIVOLCS recommends that entry into the six kilometer-radius Permanent Danger Zone or PDZ and a precautionary seven kilometer-radius Extended Danger Zone or EDZ in the south-southwest to east-northeast sector, stretching from Anoling, Camalig to Sta. Misericordia, Sto. Domingo must be strictly prohibited. People residing close to these danger areas are also advised to observe precautions associated with rockfalls, PDCs, and ashfall. Active stream/river channels and those identified as perennially lahar-prone areas on all sectors of the volcano should also be avoided especially during extreme weather conditions when there is heavy and prolonged rainfall. Civil aviation authorities must advise pilots to avoid flying close to the volcano's summit as airborne ash and ballistic fragments from sudden explosions and PDCs may pose hazards to aircraft.

B. ALERT STATUS OF BULUSAN VOLCANO

Bulusan Volcano has returned to normalcy following a general decline in monitoring parameters. This is supported by the following observations:

1. **Volcanic Earthquake Activity:** The frequency of volcanic earthquakes has declined to baseline levels (0-2 earthquakes/day) since May 17, 2019. This indicates that rock fracturing within the volcanic system associated with hydrothermal activity has diminished.
2. **Ground Deformation:** Precise Leveling data indicated slight inflation of the mid-slopes since the second quarter of 2019 after a period of deflation in the beginning of the year,

while continuous GPS data for the same period recorded apparent deflation of the edifice related rather to regional tectonic motion. The overall ground deformation data indicate that there is no pressurization from subsurface magma, with the deformation observed in the mid-slopes most likely due to seasonal changes within the shallow hydrothermal system.

3. **Gas Emission:** Sulfur dioxide emission or SO₂ flux from Bulusan based on gas spectrometry remains below detection levels since 2018. The relatively low levels of SO₂ flux indicate the depletion of volcanic gas supply from an active shallow hydrothermal or deep magmatic source. Ambient carbon dioxide (CO₂) concentration is also decreasing in monitored springs around Bulusan Volcano.

4. **Visual Observation of the Summit:** Degassing activity from the active vents has been characterized by weak emission of steam-laden plumes consistent with diminished hydrothermal activity.

In view of the above, PHIVOLCS-DOST is now lowering the alert status of Bulusan from Alert Level 1 to **Alert Level 0**. This means observational parameters have returned to baseline or background levels and no magmatic eruption is foreseen in the immediate future. However, in the event of a renewed increase in any one or combination of the above monitoring parameters, the alert status may step up once again to Alert Level 1.

C. ALERT STATUS OF TAAL VOLCANO

Activity in the Main Crater in the past 24 hours has been characterized by weak to moderate emission of white steam-laden plumes 100 to 800 meters high from the Main Crater that drifted southwest. Sulfur dioxide (SO₂) emission was measured at an average of 409 tonnes/day.

The Philippine Seismic Network (PSN) plotted a total of seven hundred forty-four (744) volcanic earthquakes since 1:00 PM, January 12, 2020. One hundred seventy-six (176) of these registered at magnitudes M1.2-M4.1 and were felt at Intensities I-V. Since 5:00 AM on January 24, 2020 until 5:00 AM today, there were six (6) volcanic earthquakes plotted that registered at magnitudes M1.5-M2.3 with no felt event.

For the past 24 hours, the Taal Volcano Network, which can record small earthquakes undetectable by the PSN, recorded four hundred twenty (420) volcanic earthquakes including eleven (11) low-frequency earthquakes. Seismic activity likely signifies magmatic intrusion beneath the Taal edifice that may lead to eruptive activity.

Alert Level 4 still remains in effect over Taal Volcano. DOST-PHIVOLCS recommends total evacuation of Taal Volcano Island and high-risk areas as identified in the hazard maps within the 14-km radius from Taal Main Crater and along the Pansipit River Valley where fissuring has been observed. Based on PAGASA wind forecast, if the eruption plume remains below five (5) km, ash will be drifted to the municipalities west and northwest of the Main Crater; however, if a major eruption occurs during the day and the eruption column exceeds 7 km, ash will also be drifted over the western parts of Laguna and Quezon provinces. Residents around the volcano are advised to guard against the effects of heavy and prolonged ashfall. Civil aviation authorities must advise pilots to avoid the airspace around Taal Volcano as airborne ash and ballistic fragments from the eruption column pose hazards to aircraft. DOST-PHIVOLCS is continually monitoring the eruption and will update all stakeholders of further developments.

II. ACTIONS TAKEN

1. NDRRM Operations Center prepared NDRRMC Advisory and Update, and disseminated the same to OCD Regional Centers V and CALABARZON through NDRRMC website in order to closely monitor the situation and take appropriate actions for any new development.
 2. Concerned NDRRMC member-agencies were provided with a copy of the Memorandum for the SND.
 3. DOST-PHIVOLCS is closely monitoring the activities of Mayon, Taal, and Bulusan Volcanoes and any new development will be relayed to all concerned.
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