



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

### Taal and Mayon Volcano Bulletin

Releasing Officer:

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#### **I. SITUATION OVERVIEW**

##### **A. ALERT STATUS OF TAAL VOLCANO**

**This serves as a notice for the lowering of Taal Volcano's status from Alert Level 3 (decreased tendency towards hazardous eruption) to Alert Level 2 (decreased unrest)**

After step-down to Alert Level 3 last 26 January 2020, Taal Volcano's condition in the succeeding three weeks has been characterized by less frequent volcanic earthquake activity, stabilizing ground deformation of the Taal Caldera and Taal Volcano Island (TVI) edifices and weak steam/gas emissions at the Main Crater. These observations are supported by the following monitoring parameters:

1. Since 26 January 2020, volcanic earthquakes recorded by the Taal Volcano Network (TVN) averaged 141 events/day while the number of significant events recorded by the Philippine Seismic Network across the Taal region declined to 127 events of magnitudes M1.4 to M4.3. The number and energy of tremor and low frequency events associated with activity in the shallow magma and hydrothermal region beneath the TVI edifice have also diminished. These parameters are consistent with degassing ponded magma rather than active magma transport to and from the shallow magma reservoir beneath TVI.
2. Continuous Global Positioning System (GPS) data from 13 January to 11 February recorded a net subsidence of the Taal Caldera and TVI, following uplift on the northwestern caldera and subsidence of TVI on 12-13 January. Subsidence along the Pansipit River Valley, where extensive fissuring occurred, was also recorded by campaign GPS monitoring between 24 and 27 January. The overall ground deformation behavior of Taal Volcano for the above periods indicates post-eruptive subsidence and relaxation of the edifice after the cessation of magma transport, signalled by hybrid earthquake activity on 18 January
3. Sulfur dioxide or SO<sub>2</sub> flux based on campaign Flyspec data averaged 62 tonnes/day since 26 January, consistent with a weakly degassing shallow magma source, diminished plume activity or absorption of volcanic gas by a recovering lake at the Main Crater and by TVI's recovering hydrothermal system.

4. Activity in the Main Crater has been characterized by the generation of weak steam-laden plumes, consistent with decreased magmatic unrest.

**In view of the above observations, DOST-PHIVOLCS is lowering the alert status of TaalVolcano from Alert Level 3 to Alert Level 2 to reflect the overall decreasing trend in the level of monitoring parameters.** Alert Level 2 means that there is decreased unrest but should not be interpreted that unrest has ceased or that the threat of an eruption has disappeared. Should an uptrend or pronounced change in monitored parameters forewarn a potential eruption, the Alert Level may be raised back to Alert Level 3. At such time, people residing within areas at high risk to base surges who have returned after the step-down to Alert Level 2 must therefore be prepared for a quick and organized evacuation. Conversely, should there be a persistent downtrend in monitored parameters after a sufficient observation period, the Alert Level will be further lowered to Alert Level 1.

DOST-PHIVOLCS reminds the public that at Alert Level 2, sudden steam-driven or phreatic explosions, volcanic earthquakes, ashfall and lethal accumulations or expulsions of volcanic gas can occur and threaten areas within TVI and along its coast. DOST-PHIVOLCS recommends that entry into TVI, Taal's Permanent Danger Zone must be strictly prohibited. Local government units are advised to additionally assess previously evacuated areas within the seven-kilometer radius for damages and road accessibilities and to strengthen preparedness, contingency and communication measures in case of renewed unrest. People are also advised to observe precautions due to ground displacement across fissures, frequent ashfall and minor earthquakes. Communities beside active river channels particularly where ash from the main eruption phase has been thickly deposited should increase vigilance when there is heavy and prolonged rainfall since the ash can be washed away and form lahars along the channels. Civil aviation authorities must advise pilots to avoid flying close to the volcano as airborne ash and ballistic fragments from sudden explosions and wind-remobilized ash may pose hazards to aircrafts. DOST-PHIVOLCS is closely monitoring Taal Volcano's activity and any new significant development will be immediately communicated to all stakeholders.

## **B. ALERT STATUS OF MAYON VOLCANO**

Mayon Volcano's seismic monitoring network did not detect any volcanic earthquake during the 24-hour observation period. Moderate emission of white steam-laden plumes that crept downslope before drifting northeast and northwest was observed. Recent electronic tilt data showed inflation of the northern sector of the volcanic edifice that began in the last quarter of 2019. This follows an inflationary trend that began in February 2019 as recorded by continuous GPS monitoring.

**I DOST-PHIVOLCS reiterates that Alert Level 2 currently prevails over Mayon because the volcano is at a moderate level of unrest.** It is therefore strongly recommended 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, should be strictly prohibited. The public is reminded that sudden explosions, lava collapse, pyroclastic density currents or PDCs and ashfall can occur without warning and threaten areas in the upper to middle slopes of Mayon. People residing close to these danger areas are also advised to observe precautions against 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.

DOST-PHIVOLCS is closely monitoring Mayon Volcano's condition and any new development will be relayed to all concerned.

## II. ACTIONS TAKEN

1. NDRRM Operations Center prepared NDRRMC Advisory and Update, and disseminated the same to OCD Region IV-A and V 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 Taal and Mayon Volcanoes and any new development will be relayed to all concerned.
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