



Situational Report for the Mayon Volcanic Activity (2023)

SitRep No. 60 for the Mayon Volcanic Activity (2023)

August 10, 2023 08:00 am

On 05 June 2023, the alert status of Mayon Volcano was raised to Alert Level 2 (Increasing Unrest) following a sharp increase in the incidence of rockfall from its summit lava dome from an average of 5 events per day in May 2023 to 49 events per day on 5 June 2023.

Days of increased incidence and volume of rockfall based on seismic records were followed by the generation of short pyroclastic density currents (PDCs) or "uson" in the morning of 08 June 2023. The PDCs were emplaced on the Bonga (Legazpi City), Miisi (Daraga) and Basud (Sto. Domingo) Gullies as far as two (2) kilometers from the summit crater. This indicated that new, less degassed lava was already being spalled from the summit dome and that eruption of very slowly extruding magma had slightly increased.

On 08 June 2023, 12:00 PM, Alert Level 3 (Increased Tendency Towards Hazardous Eruption) was raised. In the evening thereof, incandescent rockfall generated by intermittent collapse of an apparent fluidal lava portion of the summit dome were deposited on the above gullies within a kilometer of the crater.

Fair crater glow or "banaag" and incandescent rockfall shed from new fluidal lava at the summit of Mayon Volcano was observed on the night of 10 June 2023.

On 11 June 2023, at around 7:47 PM, lava flow activity commenced from the summit crater of Mayon Volcano. The activity formed two lobes of lava that emplaced within 500 meters from the crater and shed lava debris on the Mi-Isi (south) and Bonga (southeastern), and Basud (eastern) Gullies that fell within 2 kilometers from the crater. This development was accompanied by only weak seismic activity and a slight swelling of the upper portions of the edifice prior to lava flow based on electronic tilt data.

From 11 to 25 June 2023, very slow effusion of lava from the summit crater emplaced lava flow and collapsed debris on the Mi-isi (south) and Bonga (southeastern) gullies. During this period, the lava flows have advanced to maximum lengths of 2,500 meters from the summit while collapse debris have deposited up to 3,300 meters from the crater. Volcanic earthquakes, rockfall events, and PDCs have also been observed during the period.

On 26 June 2023, 4:00 PM, there was an increased seismic activity and ground deformation in Mayon Volcano. Eruptive activity has been dominated by weak aseismic effusion of degassed lava from the summit crater. However, an increasing number of weak and shallow volcanic earthquakes began on 24 June 2023 and steadily increased to 102 volcanic earthquakes during a 24-hour between 25 and 26 June 2023. Between 5:00 AM and 3:00, 26 June 2023, additional 100 volcanic earthquakes were recorded. The increased seismicity was accompanied by a noticeable sharp jump in ground tilt on the southwest sector of the edifice that began on 25 June 2023.

On 30 June 2023, eruptive activity at Mayon Volcano was dominated by the generation of dome-collapse PDCs on the Basud Gully on the eastern slopes. The largest of these events occurred at 1:01 PM and lasted eight (8) minutes based on the seismic record. Four (4) visible PDCs between 6:00 PM and 8:00 PM that lasted approximately four (4) minutes each traveled 3 to 4 kilometers downslope of the Basud Gully and generated one (1) kilometer-tall ash clouds that drifted to the north and northwest. Ashfall was recorded to have fallen on Tabaco City.

On 10 July 2023, PDCs were generated by partial collapses from the summit lava dome and the advancing front and margins of lava flows and traveled one to three minutes within four kilometers of the Basud, Mi-isi, and Bonga Gullies. Thin ashfall was reported in some areas of Brgy. Mabinit, Legazpi City, Brgy. Budiao and Brgy. Salvacion, Daraga, and Camalig, Albay.

On 21 July 2023, 10:00 AM, a Lahar Advisory for Mayon Volcano was issued based on Weather Advisory No. 5 of 20 July 2023, 11:00 AM. The Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) has estimated a Low Pressure Area (LPA) exists approximately 700 km east of Borongan, Eastern Samar which will bring

cloudy skies with scattered rain showers and thunderstorms across the Bicol Region including Albay Province. It is further expected that the LPA will develop into a Tropical Depression (TD) named "EGAY" which can bring moderate to heavy rain between Sunday (23 July 2023) and Monday (24 July 2023). Due to this development, communities in predetermined areas with lahar hazards from Mayon Volcano are strongly recommended to be vigilant and ready. The incoming tropical depression is expected to bring about prolonged and heavy rainfall which may generate syn-eruption lahars along major channels draining the Mayon Volcano edifice by incorporating loose material from thick pyroclastic density current (PDC) deposits and ashfall from the ongoing 2023 eruption. The bulk of erodible PDC deposits currently occupy the watershed areas of the Mi-isi, Bonga and Basud Channels. In addition, older and erodible eruption deposits occupy the watershed areas on the eastern and western slopes of the edifice and can be remobilized as non-eruption lahars by erosion of banks and channel beds. Mayon lahars can threaten communities along the middle and lower slopes and downstream of these channels with inundation, burial, and wash away.

At 7:56 PM, short-lived lava ejection also occurred that lasted 28 seconds accompanied by seismic and infrasound signals. In total, twenty-two (22) LFVQs including one (1) ashing and one (1) short-lived lava ejection, as well as four (4) PDCs and one hundred seventy-five (175) rockfall events, were recorded by the Mayon Volcano Network. Volcanic sulfur dioxide (SO₂) emission averaged 1,758 tonnes/day on 21 July 2023.

From 01 July to 09 August 2023, very slow effusion of lava from the summit crater of Mayon Volcano continued to feed lava flows and collapse debris on the Mi-isi (south) and Bonga (southeastern) gullies. During this period, the lava flows have advanced to maximum lengths of 2,800 meters from the summit while collapse debris have deposited up to 4,000 meters from the crater. Volcanic earthquakes, rockfall events, and PDCs have also been observed during the period.

At approximately 6:00 PM, 31 July 2023, eruptive activity at Mayon became dominated by phases of intermittent ashing alongside increases in the apparent rates of lava effusion from the summit crater. The ashing phases lasted 1 to 43 minutes and consisted of 1 to 16 discrete events recorded as low-frequency volcanic earthquakes or LFVQs of typical 30 seconds to 1 minute and 17 seconds duration.

As of 10 August 2023, Alert Level 3 is maintained over Mayon Volcano, which means that it is currently in a relatively high level of unrest and hazardous eruption within weeks or even days could still be possible.

AFFECTED POPULATION

A total of 9,876 families or 38,396 persons were affected. Of which, 5,371 families or 18,801 persons were served inside 27 ECs and 418 families or 1,453 persons were served outside ECs:

Affected Regions	AFFECTED			INSIDE ECs			OUTSIDE ECs	
	Brgy	Families	Persons	No. of ECs	Families	Persons	Families	Persons
TOTAL	26	9,876	38,396	27	5,371	18,801	418	1,453
Region 5	26	9,876	38,396	27	5,371	18,801	418	1,453

CLASS SUSPENSION

Classes and work were suspended in the following regions:

REGION	No of cities/municipalities
	CLASSES
GRAND TOTAL	6
Region 5	6

DECLARATION OF STATE OF CALAMITY

A total of 18 cities/municipalities were declared under the State of Calamity. Below is the number of SOCs issued:

REGION	NO. OF SOCs ISSUED			
	REGIONAL	PROVINCIAL	CITY/ MUNICIPALITY	BARANGAY
GRAND TOTAL	0	1	0	0
Region 5	0	1	0	0

PRE-EMPTIVE EVACUATION (ANIMALS)

PROVINCE	NUMBER OF HEADS	
	LIVESTOCK	POULTRY
Grand Total	1120	0
Region 5	1,120	0

ASSISTANCE PROVIDED

The following assistance were provided to Region 5.

	QTY	UNIT	AMOUNT (PHP)
GRAND TOTAL	184,742		299,315,302.37
Distilled water 6L	6,991	bottle	635,985.9
Empty Drum	85	piece	0
F/NFIs	0		36,828,926.2
Family Food Pack	138,867	Pack	81,768,665.02
Family Kit	424	box	3,698,055.92
Family Tent	111	piece	1,970,100
Financial	56		690,480
Financial	11,015	families	98,301,220
Fuel Assistance	0		984,665.84
Hog Grower Feeds (25kgs per bag)	500	bags	750,000
Hygiene kit	0		114,000
Hygiene kit	11,727	set	16,103,422.24
Knapsack Sprayer	10	piece	25,000
Laminated sack	170	piece	144,500

Laminated sack	18	roll	66,398.4
Malong	2,890	piece	722,500
Modular Tent	600	piece	2,712,000
NFIs	0		779,024.03
Net	20	rolls	100,000
Nylon Rope	6	rolls	12,246
Others	0		31,474,802.94
Plastic Drum	32	piece	65,000
Rice	5,200	sack	6,500,000
Ruminant Feeds	50	bags	68,750
Siphoning Service	0		5,577,000
Sleeping Kits	5,590	set	7,096,839.88
Tarpaulin	380	roll	2,125,720

Remarks

Seven thousand forty-three (7,043) cumulative consultations from 12 June to 09 August 2023 were recorded by DOH CHD V in different evacuation centers in Albay. Of which, 5,542 consultations were due to the top 10 causes namely: cough, colds, or sore throat with or without fever; headache; open wounds and bruises; loose stools; high blood pressure; eye itchiness, redness with or without discharge; toothache; abdominal pain; and skin disease.