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Saint-Pierre, Friday 12 February 2021, 12h (UTC -4)

Weekly report on the activity of la Montagne Pelée for the period from 5th to 12th February 2021

The seismicity of volcanic origin has decreased in the last week. None of these earthquakes were felt by the population. Between February 5, 2021 at 4 p.m. UT (local time + 4 hours) and February 12, 2021 at 4 p.m. UT (local time + 4 hours), the OVSM recorded at least 6 volcano-tectonic earthquakes of magnitude less than or equal to 1, with one earthquake located at shallow depth inside the volcanic edifice, 700 m above sea level. This volcano-tectonic type seismicity, characterized by high frequency signals, is associated with micro-fracturing in the volcanic edifice.

During the period of this report, OVSM recorded 1 isolated hybrid type earthquake (earthquake characterized by low and high frequencies). This signal containing low frequencies is associated with the migration of fluids in the volcanic edifice. During the period of this report, the OVSM again recorded long-period type seismic signals contained within a volcanic tremor-type signal between 8:20 p.m. - 11:00 p.m. UT (local time + 4 hours) on February 8, 2021. These signals containing low frequencies are also associated with the migration of fluids in the volcanic edifice.

During phases of volcanic reactivation, it is common for periods of increased seismic activity to alternate with phases of lower seismic activity. The seismicity of volcanic origin remains above the average base level recorded between January 1, 2015 and April 2019 (the date of the start of its increase).

A zone of strongly degraded, browned and dead vegetation is observed on the southwest flank of Mount Pelée, between the upper Claire River and the Chaude River, above their confluence. A field expedition on the ground on February 8, 2021 by the OVSM IPGP, with the support of the STIS and the civil protection helicopter, confirmed the presence in this zone of diffuse and passive soil degassing, without the presence of fumeroles, of carbon dioxide (CO₂, an odorless and colorless gas) significantly higher than the base level and which was measured with specific and calibrated detectors of OVSM. This area is located less than 200 m from the Claire River where the presence of hydrogen sulfide (H₂S, smell of rotten egg) has been reported in scientific literature for several years, in the vicinity of thermal springs that originate from the hydrothermal system of the Mount Pelée.

This report and the monthly OVSM-IPGP bulletins are available at <http://www.ipgp.fr/fr/ovsm/actualites-communiqués-publics-de-lovsm>. You can also find us on our Facebook and Twitter accounts.

The alert level remains yellow: vigilance.

The Director's office of OVSM IPGP.