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Saint-Pierre, Friday 05 March 2021, 12h (UTC -4)

Weekly report on the activity of la Montagne Pelée for the period from 26th February to 05th of March 2021

Seismicity of volcanic origin has decreased slightly over the past week. None of these earthquakes were felt by the population. Between February 26, 2021 4 p.m. UT (local time + 4 hours) and March 5, 2021 4 p.m. UTC (local time + 4 hours), the OVSM recorded at least 19 volcano-tectonic earthquakes of magnitude less than or equal to 1 located at shallow depth inside the volcanic edifice, between 0.4 km below sea level and 1 km above sea level. Superficial volcano-tectonic seismicity, characterized by signals of high frequencies, is associated with micro-fracturing in the volcanic edifice.

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

A main zone of strongly degraded, browned and dead vegetation is still observed on the southwest flank of Montagne Pelée, between the upper Claire River and the Chaude River, above their confluence. A new field expedition on March 5, 2021 by the OVSM IPGP with the support of the STIS (Territorial Fire and Rescue Service) and the Civil Security helicopter, realized for geological observations, confirmed the presence in this area of diffuse and passive soil degassing of carbon dioxide (CO₂, an odorless and colorless gas), from the ground, and without the observation of fumaroles (water vapor and gas visibly escaping from an orifice or a crack), with concentrations above baseline values. The measurements were carried out with a specific and calibrated OVSM detector. This area is located less than 200 m from the Upper Claire River where fumes of hydrogen sulfide (H₂S, smell of rotten egg) has been reported in scientific literature for several years near thermal springs that come from the hydrothermal system of Mount Pelée. Other probable areas of degraded vegetation, of smaller extent, are visible on the right bank of the Upper Claire river under the Morne Plumé as well as in front of the Morne Plumé, on the left bank of the Upper Claire river, near the main area described above.

This report and the monthly OVSM-IPGP bulletins are available at <http://www.ipgp.fr/fr/ovsm/actualites-communiques-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.