

Preliminary Statement SAC 24

November 14th, 2019

Soufrière Hills volcano has shown no significant changes in its behaviour during the past year. Measurements of sulphur dioxide emissions have been carried out by helicopter or boat, as well as by the ground-based spectrometer network, showing no significant change in the outgassing rate. Images of fumaroles on the dome obtained by thermal camera indicate that the temperature of volcanic gases remains high. Seismicity has remained at a very low level except for occasional short bursts of volcano-tectonic earthquakes, possibly generated in the hydrothermal system. Monitoring of ground deformation indicates a slow but continuous lengthening over the island, with a maximum uplift of about one centimetre over the last year. While this is consistent with the activity over the previous 8 years, a small reduction in the rate of deformation is now evident.

Taking these observations together, we conclude that the volcano remains in a state of unrest. While the continuous pressurisation of the magmatic system cannot be ruled out, we also consider now the possibility that part of the ongoing surface deformation could be a delayed response to a previous magma intrusion that ceased several years ago. Regardless, a resumption of lava extrusion remains a possibility in the future, even though there are no signs that this is imminent. We consider that the most likely scenario for the next year is a continuation of the current state.

The volcano is still a potential source of hazards. The major part of the lava dome remains stable but steep parts of the dome could be destabilized by various processes. The chance that pyroclastic flows will occur within the next year remains low. However, hazards could occur at any time and pose a threat to people working in or visiting Zone V. Continuous monitoring of the volcano is essential.