



Morphology, flow front advance and volume of the active lava flow from the 2006 eruption of Mayon Volcano, Philippines

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The data presented here are from field surveys conducted from 20 July to 20 September during the 2006 eruption of Mayon Volcano supplemented by monitoring parameters from Mayon Volcano Observatory. Lava flows comprise the bulk of the eruptive product from this mainly effusive eruption. The 2006 eruption of Mayon Volcano deposited lava flows to the south and southeast sector of the volcano. Blocky to aa type basaltic andesite (53.76 wt. % SiO₂; crystallinity: ~50% phenocryst) lava forming leveed flows were deposited for more than 2 months from 14 July to 01 October 2006. The total volume is 70 M m³ with average volume discharge of 0.9 M m³ day⁻¹. Flow front velocities decrease as the flow advance from the upper slope (higher slope angle) to the lower slope, indicating the influence of slope on lava flow dynamics. The lava flows were noted to accumulate at the break in slope forming here the widest segment for the entire deposit length. The longest lava flow in the Mabinit-Bonga Channel reached a horizontal distance of 6.4 km from the crater exceeding in length previous lava flows in the SE sector and going beyond the 6km-radius Permanent Danger Zone (PDZ). Mapping, volume estimation and characterization of flow dynamics for erupted products are important not only for hazard assessment but also for analysis of conduit and reservoir conditions.