

## **Non negligible passive degassing from Kerinci, the greatest volcano in Indonesia**

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Kerinci is a massive 12 x 25 km wide volcano situated in the central part of Sumatra. It is one of the most active volcanoes in Indonesia. At least 31 moderate eruptions were reported to occur since 1838. Kerinci is also the highest active volcano of Indonesia, culminating at 3805 m a.s.l. Accessing the summit of this edifice requires at least 2 days of expedition with camping gear and intense climbing, under ambient temperature that can descend lower than 10 degree celsius with humidity close to 100 percent at day break. Due partly to this access difficulty, little is known about this volcano.

In order to gain insights into the activity of this volcano, a set of remote sensing tools, including DOAS, thermal Infrared camera and ultraviolet camera, were deployed at the summit and about 8 km from the crater, in April 2012. Measurements results indicate for the first time that Kerinci volcano is releasing about 10 tons of sulfur dioxide daily into the atmosphere. Results further suggest that Kerinci continuous degassing is sustained by regular puffs, suggesting successive arrival of gas bubbles at the surface. Henceforth, with its regular eruption and its continuous passive degassing, Kerinci is a non negligible source of volcanic degassing, an example to be consider for the numerous yet little known Indonesian volcanoes whose contributions to the atmosphere should be integrated in volcanic emission inventories.