



Dyngjúsandur: a rapidly evolving hyperactive dust source north of Vatnajökull glacier, Iceland.

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Dyngjúsandur in the interior of Northeast Iceland is one of the most active dust source on Earth. It emits large quantities per unit area and major dust storms can reach several hundred thousand tons of dust. The dust is made of basaltic volcanic glass originating from underneath Vatnajökull glacier, brought down to glaciofluvial floodplain during warm days in summer, but the plains are subjected to dry out during nights and cold weather. The sediments are quite fine (median $< 63 \mu\text{m}$). They are subjected to storms resulting in dust storms and saltation of heavier materials. During 2014-2015, a major eruption covered a large part of the plains with basaltic lava. This has altered the aeolian behavior in terms of dust production and the formation of a periodic lake with the glacial stream blocked by the lava. The lake, which can reach about 1 km² in area, dries out every day, leaving new fine glacial sediments on the surface. These sediments are subject to intense dust productivity.

We installed camera on top of the lava to monitor the aeolian activity during the summer of 2017. Results show very frequent dust storms which are seldom visible on satellite images. The area is subjected to rapid geomorphic changes, with the surface rising and increasing dust activity. The frequency and dust productivity is of comparable degree to the Bodéle and other most active dust sources found.