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## Interpretability of Quaternary palaeo dune fields (Eastern Canary Islands)

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Generally, the Quaternary palaeo dune fields on the Eastern Canary Islands are built up by different dune generations which are separated by reddish silty layers. The biogenic carbonate sands originate from the shallow marine shelf around the islands and reach the dune fields from northern direction.

On northern Fuerteventura different lava flows were formed during the Late Pleistocene, and gradually interrupted the sand pathways of the dune fields close to the western coast. The sedimentation pattern in these dune fields indicates that this cut off was completed not later than 50 ka. A huge calcium carbonate crust in the outcrops marks the stratigraphic position of that final cut off. This crust was a subject of intensive debates, and was formerly linked to unstable environmental conditions. However, within the dune fields on the neighbouring island Lanzarote we did not find a comparable carbonate crust at the similar stratigraphic position. Instead, the El Jable dune field on northwestern Lanzarote shows a well-resolved dune sequence with intercalated silty layers during that period.

Consequently, the dune fields on the Eastern Canary Islands point to the importance of carbonate sand transport as the main driving force within the sediment system. Finally we can conclude that unimpaired sand pathways are a mandatory prerequisite for the buildup of palaeoclimatic signals in the Quaternary dune archives.

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