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## Experimental wind erosion study in argan woodlands, badlands and wadis in the Souss-Massa Basin, Morocco

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The Souss-Massa basin features unique and centuries old human–environment interactions in a vulnerable arid ecosystem. A high pressure caused by intense agriculture combined with increasing water scarcity causes degradation of soils and vegetation cover. The test sites are located on alluvial fans from the flanking High Atlas Mountains in the north and the northern talus of the Anti Atlas in the south. Wind-tunnel tests were applied to investigate susceptibility to wind erosion from sparse argan forest, badland and wadi surfaces. The results show diverse potential for emission of coarser and finer mineral dust with highest values found on freshly tilled surfaces in the extensively managed argan forest and sandy wadi surfaces. For one tested wadi section, very erodible areas were found in close vicinity to areas with much lower sediment yield. The wind-erosion dynamics are thus closely related to fluvial processes previously influencing surface characteristics as well as previous sorting processes by wind impact. The strongly crusted surfaces attributed to badland environments are least susceptible to wind erosion, with the exception of higher emissions measured on the wadi rim.

The data give insight into possible wind-erosion patterns under non-extreme wind regime and are a valuable basis for investigation of interactions between fluvial and aeolian processes in wadi structures.