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Assessing late Quaternary sediment dynamics and former weathering intensities in a tectonically active alluvial fan system– the Binalud fan in northeastern Iran

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Alluvial fans are widespread features in arid and semi-arid regions that show complex sediment dynamics through time especially in tectonically active regions. This study investigates sediments of an alluvial fan system with a catchment of 3.3 km2 in the tectonically active semi-arid to arid southern slope of the Binaloud Mountains in northeastern Iran by means of field mapping and luminescence dating methods to reconstruct the evolution of the late Quaternary sediment dynamics. Furthermore, given that this region was hardly studied with respect to paleoenvironmental changes so far it will be tried to reconstruct former weathering intensities in the catchment using elemental ratios that were derived from XRF and ICP-MS measurements from the numerically dated fan sediments.
This poster presents the concept and first results of this study.