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# Reconstruction of the coastal morphodynamics of the Fulong-beach dune field in north-eastern Taiwan

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The Fulong-beach dune field is located at the north-eastern coast of Taiwan. Built up of medium and fine grained quartz rich sand, it represents a unique feature of only few kilometres along the east coast of Taiwan. This unique sedimentological regime makes the area most perfectly suitable for age estimations by optically stimulated luminescence (OSL).
The dune field is crossed by the Shuangsi-river, which flows into the Pacific Ocean. The coastal area is subjected to very dynamic conditions in the transition zone between land and sea. Due to the constant force of marine and aeolian processes from tides, weather and sediment accumulation by rivers, it is a continuously changing area. Taiwan is located in a very active tectonic zone with high elevation rates, which reach from 4 mm per year at the east coast up to 7 mm per year in the southern parts of the island. Furthermore Taiwan is affected by medial 3.8 typhoons per year and minor earthquakes nearly occur every day (LIN ET AL. 2006). The consequences are high rates of erosion and sediment transport during very short time periods.
The Fulong-beach coastal area is densely populated and proud for being a tourism destination. At the northern end of the dune field the Lungmen nuclear power plant is currently under construction.
Four separate dune ridges could be identified from a digital elevation model and from field mapping. During the field campaign in October and November 2009 17 samples were taken for OSL-dating (MURRAY ET AL. 1995) out of the four dune ridges as well as out of a more than 30 m high elevated outcrop cut by the Shuangsi-river. The measurement and the evaluation of the OSL-samples will provide us an insight into the duration and intensity of the processes affecting the coastal area of Taiwan during the Holocene.
We will give an outline during the poster presentation of the methodical approach and the morphodynamical processes affecting the Fulong-beach dune field in north-eastern Taiwan.

References:
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