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# Quantification of runoff and erosion on non-vegetated lignite mining dumps of Lusatia (Germany)

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In Lusatia the post mining landscape consists of areas for agriculture and forestry, of new mining lakes in the remaining pits as well as of 15 % of areas for renaturation and natural succession.
Left to the natural dynamic of soil and vegetation, without any melioration these areas often remain bare or only sparsely vegetated, due to the specific soil chemical and –physical properties of the dump substrates. The missing vegetation and the high relief energy cause increased surface runoff and erosion. The knowledge of surface runoff and the erosion attached to it is an important aspect of the treatment of the water and matter balance within the restoration of watersheds in the post mining landscape.
Several field investigations were carried out to quantify runoff and erosion. The methodic approach bases on a combination of rainfall simulation experiments, long term field measurements, mapping and surveying with a laser measurement device as well as laboratory experiments.
Results for two sparsely and non-vegetated lignite mining dump sites in Lusatia will be presented.
The field studies were carried out within the former Collaborative Research Center 565 “Development and Evaluation of Disturbed Landscapes. Case Study Lusatian Post-Mining Landscape”.