Geophysical Research Abstracts
Vol. 20, EGU2018-10650, 2018
EGU General Assembly 2018

Alluvial and colluvial sediments as palaeoenvironmental archives for tracing human impact on medieval landscape evolution in northeastern Bavaria (Germany)

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For a long time, the role of early human settlers as a significant and increasingly important driving force of landscape development has been discussed in geoarchaeological research. As an essential agent of geomorphological processes, human activities manifest themselves both in impressive large-scale landscape features, such as dumps of medieval mining, large fortresses and housing estates with their landscape-defining effects, as well as in rather inconspicuous small forms, such as irrigation and drainage ditches, sunken roads or transport lanes generated by medieval and modern forestry.

The present contribution illustrates the results of various research projects situated in northeastern Bavaria (Germany), which provide an interesting insight into the nature and dynamics of medieval and modern landscape evolution.

The focus is on colluvial and alluvial deposits, which serve as archives of human activities and thus reveal important information on the cultural history in the region of Upper Franconia. In order to enable a temporal classification of these archives, the method of OSL dating was used in addition to radiocarbon dating and occasional dendrochronological investigations. Important findings were also provided by GIS-based analyses of high-resolution digital terrain models.

Besides isolated findings suggesting the possibility of a much earlier human occupation, clear evidence of a pronounced medieval settlement activity and an intensive agricultural use of the region since the early Middle Ages have been identified. Several distinct phases of varying geomorphodynamics can be recognized and are interpreted as result of different levels of human activities. The analyses of the investigated environmental archives indicate a complex character of this medieval cultural landscape.