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Reliable fieldwork data as a base for modelling – demonstrated by flood loam sediments in central Rhenish Slate Mts. (Westerwald)

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This is the first study of two main rivers - Große Nister and Gelbach - in the Westerwald Mts. calculating their sediment budget within a defined historic period.
The thickness and composition of the floodloams on the valley floors of these rivers depend on widespread periglacial and often loess-rich layers on the valley slopes in total of the river watersheds. Moreover, landuse practises of the rural population had an important influence on slope denudation during the historic period. Special studies about the floodloam sedimentation of Große Nister were carried out in the garden of the monastery of Marienstatt resulting in a preliminary balance. Based on artificially reworked horizons several pottery fragments of different type and few radiocarbon dates it was possible to define some 55% of the floodloam as younger than 1450 AD. A charcoal fragment from the base of the floodloam nearly of the study site was dated to 1034-1216 AD in indicating that the loam should have been anthropogenically deposited by expanding landuse during and after High Medieval. It covered an older channel system of the valley floor producing a levelled surface. Comporable field studies were carried out in the Gelbach valley in the southern, so called Lower Westerwald region.
Finally, balancing of the floodloam quantities of the rivers Große Nister, Gelbach and Aar (without their tributaries) is described. The Aar belongs to the northern Taunus Mts., it is of similar size and well studied. The totals of floodloam are being compared with different watersheds and lengths of the main rivers.