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Loess-paleosol sequences at the northern European loess belt in Germany: Examples from the Lower Rhine embayment and the northern foreland of the Harz Mountains

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In the northern part of Germany loess is distributed along the mountain front of the Central European Mountain Belt as part of the northern European loess belt. Examples from two regions, the Lower Rhine Embayment and the northern foreland of the Harz Mountains, show, that the distribution of loess and the development of loess-paleosol sequences (LPS) are controlled by relief, tectonics, the distance to larger river system, and the distance to and the occurrence of the Scandinavian ice sheet. Further, general climatic conditions have a strong influence on the development of LPS. The two key areas show different distinct patterns due to the more oceanic climate in the west (Lower Rhine Embayment) versus the rather continental climate in the east (northern foreland of the Harz Mountains). For both key areas new loess distribution maps are presented and key sections especially for the last glacial cycle are compared and summarized.