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40 shades of black: regional differences in vegetation response to a changing human influence in the Low Countries during the Dark Ages (AD 300-1000).

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During the Dark Ages, which includes the Late Roman Period (LRP, AD 300-500) and the Early Middle Ages (EMA, AD 500-1000), large scale vegetation development in Northwestern Europe is generally characterized by a forest regeneration. This forest redevelopment phase was not uniformous across the Netherlands. A comparison between existing pollen records shows that forest redevelopment started earlier and was more severe in the southern part of the Netherlands than in the northeastern Netherlands.
The prevailing view advocates that the forest redevelopment is the result of a diminishing human influence on the landscape due to the collapse of the Roman Empire. Following this view, regional changes in forest regeneration are explained by varying population densities. However, existing climate-records indicate a colder and wetter climate during the Dark Ages and the geomorphological record points to a changing landscape. How and to what extent these climatic and environmental changes contributed to the changes in vegetation development or even to the decline of the Roman Empire is largely unknown.
To understand the relative importance of the factors (climate, environment, economy and demography) influencing vegetation development it is important to accurately map regional differences in vegetation both on a regional and extra-regional scale. For an extra-regional overview all available pollen records in the Netherlands from this period are compiled to show differences in amplitude of the vegetation development during the Dark Ages. On a regional scale, vegetation reconstruction maps have been produced reflecting the influence of geological/geomorphological factors.