

Mesolithic Landscape and Vegetation Development in the Present Day IJssel Valley, The Netherlands

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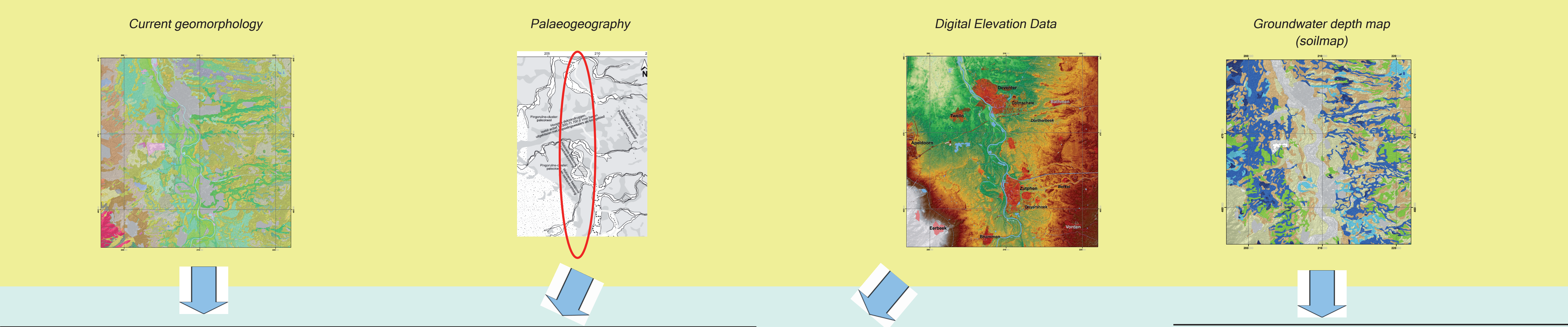
Introduction

During the Mesolithic (10-6 ¹⁴C ka BP) hunter-gatherers lived in the region of Deventer-Zutphen. Major palaeoenvironmental development occurred, involving groundwater level drop and vegetation succession. The question is whether these changes affected behavior and living conditions of the Mesolithic people. This poster offers a palaeo-hydrological and palaeo-vegetational reconstruction. Several scenarios are outlined for the palaeo-hydrological development of the region. In most of the reconstructed scenarios, succession caused the vegetation to become very dense during the Mesolithic, causing the groundwater level to drop. These factors have implications for the configuration of food resources and

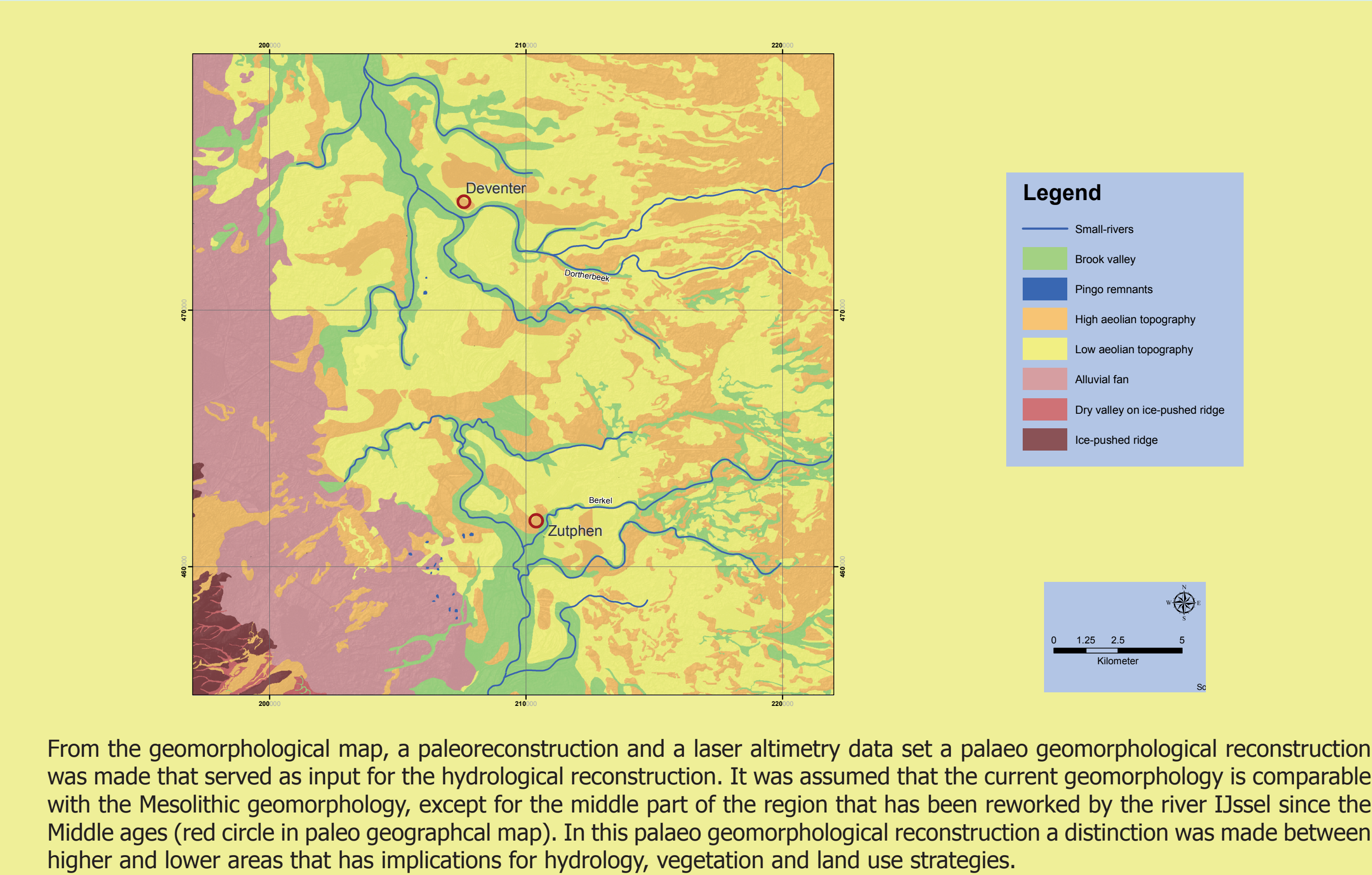
accessibility of the area. It is possible that the amount of easily accessible resources decreased and the landscape became more challenging to cross for Mesolithic hunter-gatherers. The preferred scenario, together with the other scenarios, will serve as input for a behavioural model that can improve understandings of the relationship between humans and the palaeolandscape.



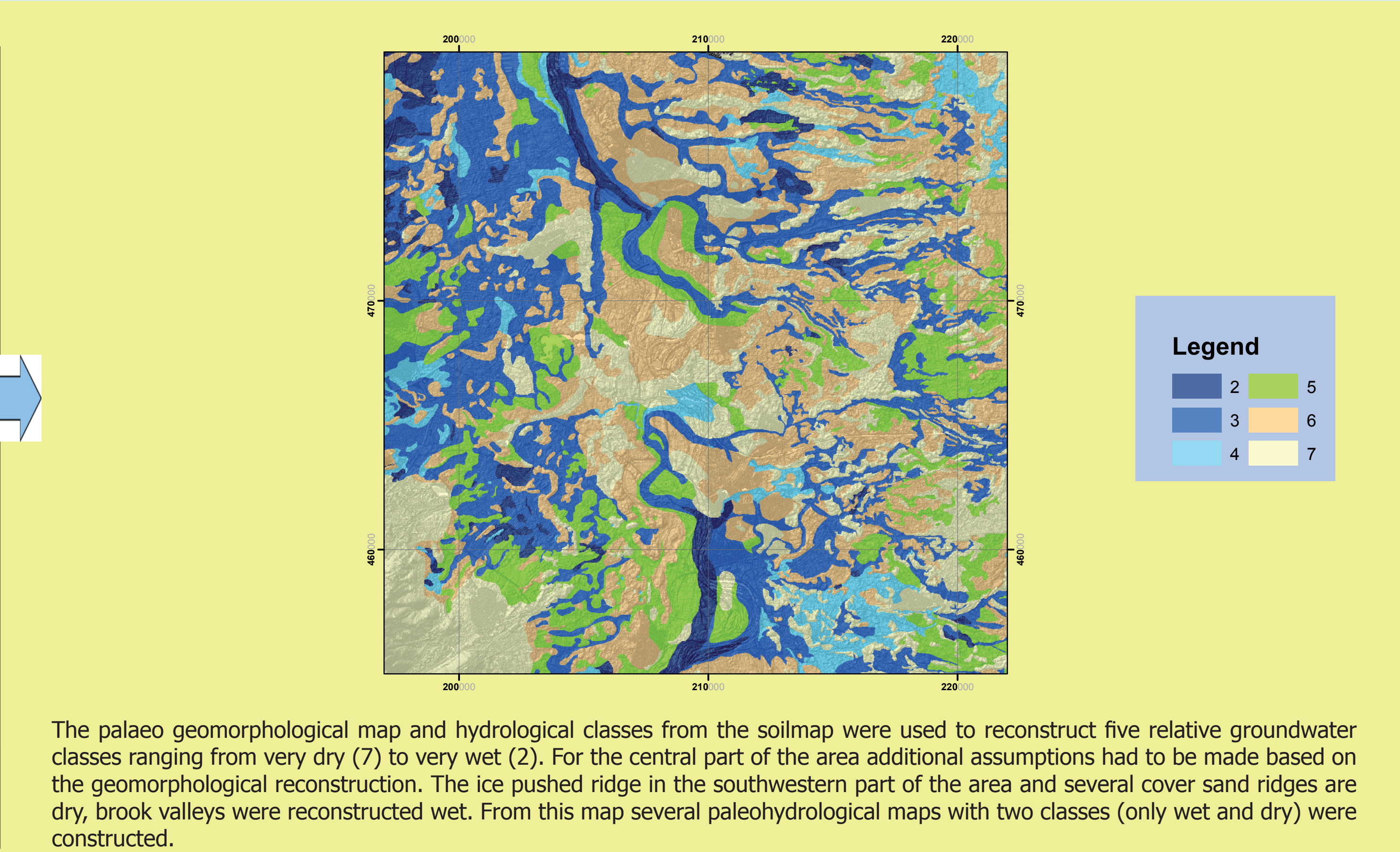
Input datasets



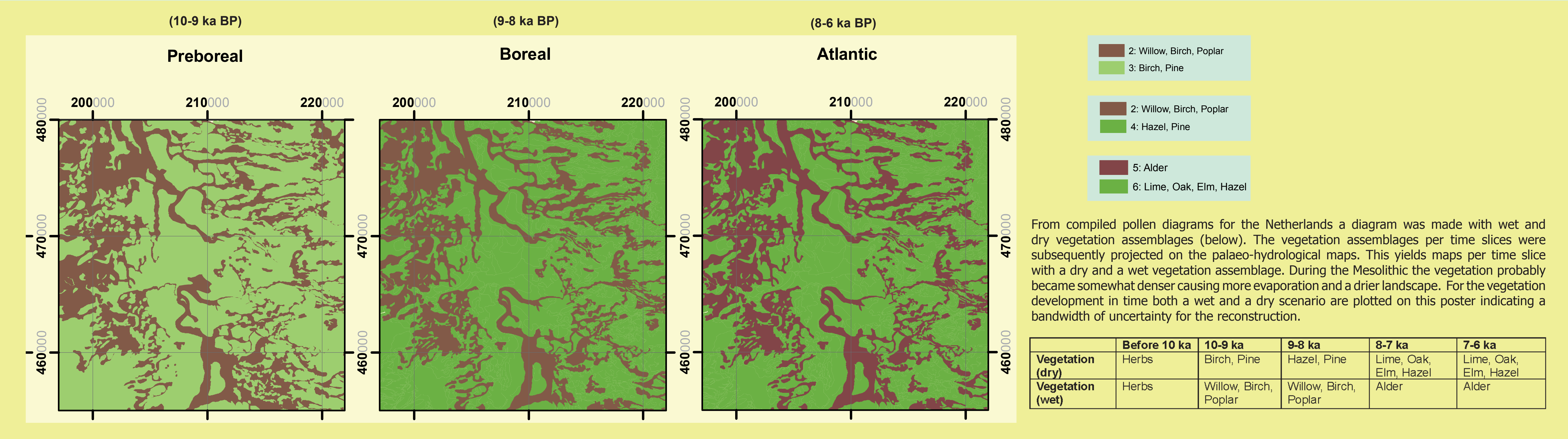
Reconstructing geomorphology



Reconstructing hydrology



Reconstructing vegetation assemblages



Conclusions and outlook

- In order to reconstruct the vegetation assemblages in time slices of 1000 year, succession (deduced from literature and pollen studies) were successfully combined with reconstructed groundwater maps.
- The wet/dry distribution as limiting factor for vegetation assemblage involves many uncertainties and assumptions. The dry sub-scenario of the wet Atlantic scenario is the preferred scenario, although other scenarios cannot really be ruled out with the currently available data.
- During the Mesolithic the vegetation probably became denser and therefore darker on the ground. The dry areas were easy to cross, but finding food resources (game, fish, edible plants) became more difficult due to the dense canopy. This may have led to a decrease in population density in this area during the Boreal and especially during the Atlantic.
- The wet vegetation areas occurred as elongated barriers in the landscape. These regions were probably difficult to cross, especially in a N-S direction. Probably, when the landscape became wetter and the vegetation denser during the Atlantic, the region became even more unattractive to live in and more challenging to cross.
- Current research is focusing on the development of hunter-gatherer land use strategy models to investigate the implications of the hydrology and vegetation distribution on human behavioral decision-making and archaeological preservation (dissertation research of Marieka Brouwer).