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High resolution palynofacies analysis to understand Holocene Sudanian landscapes. First data from the Bao Bolon middle valley (Senegal).

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The Bao Bolon valley, located in a Sudano-Sahelian context and overlapping both the Gambia and Saloum river basins, in western Senegal, is subject to strong seasonal rainfall contrasts. These particular conditions are usually badly appropriate to the good conservation of sedimentary archives. Moreover, this region is well known for his important archaeological heritage which includes the megalithic necropolis of Wanar classified on the UNESCO World Heritage list.

In addition to archaeological research, paleoenvironmental studies have been carried out at the Wanar site. Fluvial archives have been investigated and provide rich sedimentary records covering the entire Holocene period. Thus, the cultural and abiotic contexts of the middle Bao Bolon valley are now well documented (Laporte *et al.* 2017, Stern *et al.* 2019). Nevertheless, the biotic aspect, *i.e.* the landscapes and their evolution, still remains poorly documented in this region. Ongoing studies aim to better understand the Holocene palaeoenvironments and protohistoric agro-sylvo-pastoral systems by reconstituting biotic environments.

Due to the lack of pollen material, we focus on other, more abundant, organic elements recorded in the sedimentary archives. The study of organic matter has been first conducted through the palynofacies analysis. Among the different types of organic particles, we pay special attention to microcharcoals. Microcharcoals are often the longest lasting organic matter because carbonization protects the particles from degradation (except mechanical degradation). Their analysis focuses on the relative and absolute abundance, the morphology and the size of the particles. Microcharcoals are a relevant indicator of fire signals. Fires, whatever their origin, whether they are natural or anthropogenic, contribute to the changing and shaping of environmental landscapes. Therefore, high resolution palynofacies analyses contribute to a better understanding of the physical and anthropogenic transformations of the Holocene landscapes in the Bao Bolon middle valley.

The first results show a relative permanence of the signal of vegetation fires during the Holocene. The fluctuations of this burning activity are still under study. An important change seems to take

place in the second half of the twentieth century. Further studies, in particular on phytoliths are under process. They will complete the interpretation of the landscapes dynamics during the Holocene.