

PALEOHYDROLOGY AND GEOARCHAEOLOGY ALONG THE MUSONE RIVER (VENETIAN PLAIN, NE ITALY)

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One of the major issues in alluvial geomorphology and paleohydrological reconstructions is the possibility to assess the time interval intercurrent for the formation of a channel morphology or the deposition of its sedimentary infill. Numerical geochronology is a key tool (e.g. Radiocarbon, OSL), but in some archaeological contexts the use of chronology supplied by cultural differentiation allow an even precise and detailed dates.

We present the case study of the Musone River, in the apical portion of the Venetian Plain, where the construction of the new highway road along the piedmont sector has allowed to describe long stratigraphic sections and to discover several new archaeological sites. One of the major finding corresponds to the Protostoric settlement located slightly east of the present river channel, north of the city of Riese. The ancient settlements were located along the active channels of the river and the new data allow to describe the interactions between the river changes and the settlement locations. In particular, at least 4 different channels of Musone dating between 1500 and 600 BC have been recognized. They display diverse characteristics, from meandering to braided typology. In some cases it is possible to follow the channel shifting with decadal precision.

The Musone is a minor stream fed by a catchment of 40 km² extending in the pede-Alpine area, where the bedrock consists of Tertiary siliciclastic formations prone to erosive processes. In the alluvial plain the Musone formed a narrow and elongated alluvial system along the interfluvium between the alluvial megafan of Brenta River and the Montebelluna megafan, formed by Piave River before LGM. Since LGM the Musone aggraded of about 5 m over the aforementioned megafans and some buried soils testify significant depositional stasis. Musone River experienced an evolution that is strongly different from the depositional systems of the Alpine rivers, so, the study of this area supplies several data that are complementary to the ones collected in the rest of NE Italy for reconstructing the evolution of the Venetian Plain.