

*Anthropogenic transformations of low energy rivers in Normandy;
geomorphological legacy of an historical management of the Seulles river.*

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Abstract :

In Lower Normandy, knowledge of the hydrosedimentary dynamics of river before and during the installation of the numerous hydraulic installations since the Middle Ages is very fragmentary. Little is known about the rates of erosion and sedimentation that have occurred in Lower Normandy rivers over the last two millennia and what anthropogenic and climatic forces have influenced these processes. The challenge today is to understand and measure the share of inheritances in the current functioning of Lower Normandy rivers in order to help with their contemporary management. To provide answers, geomorphological and geoarchaeological research has been carried out in the middle valley of the Seulles. The study centered on the valley of the Seulles makes it possible to highlight the weight of the hydraulic installations and in particular the developments related to the mills in the setting up of this alluvial plain. Indeed, the complete structuring of the watercourse since the central Middle Ages completely artificialized the course of the channel, the slope of the water line and partitioned the minor bed favoring lateral stability and overflow sedimentation in the plain Alluvial. The installation of the mills is accompanied locally by a simplification of the layout of the Seulles as on the site of Heuzé where a large part of the current course is artificial. This structure and the acceleration of silt sedimentation for 600 years are at the origin of the establishment of a dynamic equilibrium and the hydrosedimentary forms of the present Seulles which are largely inherited. The abandonment of the management of the hydraulic structures and their destruction during the last fifty years comes to question this balance.