



Fisheries, archaeological evidences of the last sea level rise around the Island of Yeu

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To be efficient, fisheries need to be built in the intertidal range. Thus, the evolution of their geographical position in time highlights modifications of the coastlines, generally closely related to environmental changes. Along the island of Yeu (Mid-French Atlantic coast), dozens of fisheries were identified. Currently totally submerged, most of them are clearly related to the Holocene sea-level rise. According to the local sea-level curve (Stephan and Gosslin, 2014.), and to the modern marine topography and the geology, the island of Yeu used to be a part of the French Atlantic margin, connected to the continental landscape, and inhabited. It progressively became a peninsula and then an island during the neolithic period. Thus, the history of the Holocene sea-level rise is also the history of : “how this part of the continent became an island and how the inhabitants adapted to this progressive insularity”. In order to reconstruct the evolution of the landscape and the coastline, the location and shape of fisheries around the island were established through multidisciplinary studies, assembling archeologists, sedimentologists, geophysicists and geographers. A LIDAR campaign, a study of aerial photographs, side scan sonar profiles, interferometric sonar bathymetry, and 3D scans were performed since 2011. Five different water depths of fisheries implantation on the northern coast were identified along the eastern subtidal platform of the island, highlighting the last steps of the island creation process and the last population adaptation to be its new island character. The reconstruction of the basement topography and sonar data should now help us to target new submerged sites and potentially earlier structures.

Key words : fisheries, sea level rise, bathymetry, human adaptation