



High resolution Holocene record in the southeastern Bay of Biscay: use of benthic and planktic foraminifera as paleoenvironmental proxies

M. Mojtahid (1), H. Howa (1), J. Garcia (1,2), F. Jorissen (1), E. Michel (3), M. Cremer (4), F. Eynaud (4), H. Gillet (4), and S. Terrien (1)

(1) Laboratoire des Bio-Indicateurs Actuels et Fossiles (BIAF), UFR Sciences, Université d'Angers, 2, boulevard Lavoisier, 49045 Angers cedex, France, (2) Laboratoire d'Etude des Bio-Indicateurs Marins (LEBIM), Ker Chalon, Port Joinville, 85350 Ile d'Yeu, France, (3) Laboratoire des Sciences du Climat et de l'Environnement (LSCE), LSCE-Vallée Bât. 12, avenue de la Terrasse, F-91198 Gif-Sur-Yvette cedex, France, (4) Environnements et Paléo-environnements OCéaniques (EPOC), Site de Talence, Université de Bordeaux 1, avenue des Facultés, 33405 Talence cedex, France

The southeastern part of the Bay of Biscay is under the combined influence of the eastern branch of the North Atlantic Current (NAC) and coastal river plumes. The objective of this study is to use foraminiferal distribution from a 3 m high resolution record (SE Bay of Biscay; 550 m water depth) as proxies to evaluate the hydrological pattern of the Bay of Biscay during the Holocene; a period of rapid climatic change.

Faunal distributions coupled to grain size variability suggest a rapid evolution of the sedimentary structuring of the basin. Major changes are recorded in benthic and planktic foraminiferal communities suggesting important fluctuations of primary and exported productivity during the Holocene. These rapid changes could be related to variations of the oceanic hydrology of the basin and/or to the coastal rivers hydrological regimes.