



Inter-annual to decadal variability of senegalo-maurtania upwelling and its link to large scale climatic modes

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The upwelling system located off the Guinean, Senegalese and Mauritanian coasts is one of the most productive region in the world ocean. The seasonality of this system is very specific to the others part of the Canary upwelling occurring further North along the coast of Morocco and the iberian peninsula. The seasonality of the senegalo-mauritanian upwelling system is largely associated with the seasonal migration of the Inter-Tropical Convergence Zone (ITCZ), similarly to the west african monsoon. It occurs in boreal winter, when the trade winds are maximum over this region and the ITCZ is located at its southernmost position In the other hand the monsoon over the adjacent continental region occurs in boreal summer, when the ITCZ is located at its northernmost position. Many studies have highlighted the low frequency variability of the west african monsoon, linked primarily to the impact of the Atlantic Multidecadal Variability on the ITCZ migration. The interannual to decadal variability of the senegalo-mauritanian upwelling has been, on the contrary, largely overlooked, in spite of its crucial relevance for local populations and apaleo-climatic reconstruction that might reveal decadal variability. In this context, we propose an analysis of the interannual to decadal variability of the intensity of the upwelling based on recent reanalyses. This study focuses on the link with the monsoon and with large scale climate modes such as the North Atlantic Oscillation (NAO), Atlantic Multi-decadal Oscillation (AMO) and El-Nino Southern Oscillation (ENSO)