alberto.borges@ulg.ac.be

Three years of results from a mooring over a Posidonia Oceanica seagrass meadow (Corsica, France)

Champenois W.[1], B. Delille[1], J.-M. Beckers[1], M. Grégoire[1], A.V. Borges[1]

[1] MARE, University of Liège, Belgium

We report the first three years of results from a 10m deep mooring over a *Posidonia Oceanica* seagrass meadow (Corsica, France) where we deployed from August 2006 to November 2009 an array of 3 optodes. The oxygen data are used to compute by mass balance ecosystem metabolic performance rates (gross primary production (GPP), community respiration (CR), net community production (NCP)), allowing a detailed analysis of seasonal and year-to-year variability of GPP, CR and NCP. The comparison of GPP and CR values derived from the O_2 mass balance with rates derived from discrete benthic incubations (every 2 months in 2006-2007, every 4 months in 2008-2009) is very satisfactory. An application of such a mooring is to detect changes in the productivity of the Posidonia meadow that can be used as indicators of overall ecosystem "health" or degradation by human activities. Such a mooring can be used as an affordable and simple tool for management and sustainable development of coastal areas in the Mediterranean.