

ORIGINAL ARTICLE

Impact of fish farming facilities on *Posidonia oceanica* meadows: a reviewChristine Pergent-Martini¹, Charles-François Boudouresque², Vanina Pasqualini¹ & Gérard Pergent¹¹ EqEL, Faculty of Sciences, University of Corsica, Corte, France² UMR CNRS DIMAR, Faculty of Luminy, Marseilles Cedex, France**Keywords**

Impact; management; Mediterranean Sea; pisciculture; seagrasses.

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Accepted: 9 August 2006

doi:10.1111/j.1439-0485.2006.00122.x

Abstract

The impact of fish farming facilities on *Posidonia oceanica* meadows was assessed from studies of intensive facilities carried out over the last few years. The disturbances caused by these fish farms were measured by means of both abiotic (light, sediment, interstitial water) and biotic variables (meadow density, leaf biometry, lepidochronology, primary production, epiphytes, reserve carbohydrates in the rhizomes), in function of increasing distance from cages and/or inside a geographically close reference site. The results showed significant degradation of these seagrass meadows in all the sectors investigated. When fish farming cages were placed above a *P. oceanica* bed, the meadow was severely degraded or disappeared and the sediment showed a strong increase in organic matter that could lead to anoxia phenomena. The irreversible impact of fish farming projects on *P. oceanica* meadows requires the application of the precautionary principle. Several recommendations (site selection, preliminary studies and monitoring over time) are suggested in order to enable piscicultural activities to be incorporated in a global process of Integrated Coastal Zone Management.