

Author's Accepted Manuscript

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www.elsevier.com/locate/csr

PII: S0278-4343(16)30019-X
DOI: <http://dx.doi.org/10.1016/j.csr.2016.01.016>
Reference: CSR3356

To appear in: *Continental Shelf Research*

Received date: 5 May 2015
Revised date: 4 January 2016
Accepted date: 27 January 2016

Cite this article as: B. Serranito, A. Aubert, L. Stemmann, N. Rossi and J.L. Jamet, Proposition of indicators of anthropogenic pressure in the bay of Toulon (mediterranean sea) based on zooplankton time-series, *Continental Shelf Research*, <http://dx.doi.org/10.1016/j.csr.2016.01.016>

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**Proposition of indicators of anthropogenic pressure in the Bay of Toulon (Mediterranean Sea)
based on zooplankton time-series**

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Abstract

Zooplankton present characteristics of high interest in the frame of investigation for organisms sensitive to environmental changes and/or anthropogenic pressures. Such indicators are particularly needed in the present context of European legislation (Marine Strategy Framework Directive). However, zooplankton have not been given the interest they should have in regards to these issues. The aim of the present study is to provide an attempt of proposition of indicators of good environmental status and associated thresholds based on zooplankton data. Zooplankton time-series (2002-2013) from the Toulon Bay in the Mediterranean was used. This time-series presents the great characteristics that the sampling has been done jointly in two areas of the Bay of Toulon known to differ in terms of anthropogenic pressures. The study focuses on the copepod assemblage and different potential indicators are tested: ratio of copepod families on total copepod and diversity index (Pielou's evenness). The indicators' relevance was evaluated per season by looking at the importance of the overlapping region between density's distributions for each indicator in both bays. This

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