

Mercury levels and fluxes in *Posidonia oceanica* meadows

G. Pergent*, C. Pergent-Martini

Faculty of Sciences, University of Corsica, BP 52, 20250 Corte, France

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Abstract

Mercury levels in the marine phanerogam *Posidonia oceanica* were evaluated at three sites subjected to different environmental conditions (anthropogenic activity). Mercury uptake by primary production varied from 9.9 to 100.6 $\mu\text{g m}^{-2} \text{ year}^{-1}$. For the entire Mediterranean basin, nearly one ton of mercury is mobilized each year, that is to say approximately 0.5% of the annual input. More than 80% of this flux is incorporated into the food webs, mainly through the action of macro-detritivores and micro-organisms, thus facilitating the bioavailability of this metal. The remainder of mercury is stored in the matte (sink), in dead sheaths and rhizomes. These mercury stocks are estimated at several dozen tons. © 1999 Elsevier Science Ltd. All rights reserved.

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* Corresponding author.

E-mail address: pergent@univ-corse.fr (G. Pergent)