

Heavy metal bioaccumulation and risk assessment in the Nador lagoon, Morocco

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*During the last century, most coastal areas become strongly impacted by a wide range of pollutants as a consequence of the increasing anthropogenic activities. The contamination level and ecological risk status of 6 heavy metals (Ni, Cd, Pb, Cu, Cr and Zn) in sediment of Nador lagoon (Moroccan Mediterranean coast) were investigated using several statistical indices: enrichment factor, (modified) degree of contamination (Cd or mCd), (modified) pollution index (PI or MPI) and sediment quality guidelines. The bioavailability of heavy metals in the sediment to ascertain the degree of toxicity was assessed using *Cymodocea nodosa*. The concentrations of heavy metals measured in sediment are significantly higher than those from the local background. Risk assessment methods produced similar values for the levels of heavy metal pollution in Nador lagoon sediment. *Cymodocea nodosa* compartments (leaves, rhizomes and roots) showed higher bioaccumulation confirming the presence of biological adverse risk.*