Metal Contamination Of The Gökova Bay, Turkey

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The contents of heavy metals (Fe, Mn, Pb, Cu, Cd and Hg) dissolved in the water and suspended solids of Gökova Bay (Figure 1) are quite higher than the average values encountered in uncontaminated sea water [1]. The high concentrations are associated with terrestrial inputs from the mining zones and anthropogenic (domestic + industrial) sources. Moreover the distribution of Fe and Cu is affected by primary production, because these functioned as nutrients in biological activities. The Cr, Ni, and Fe concentrations of surface sediments are above the shale average [1]. The Cr and Ni contents of surface sediments representative of river mouths strongly correlate with total phosphorus contents. The high metal values are caused by terrestrial inputs from anthropogenic sources and the mining zones at the southeast part of the bay. The Al, Mn, Pb, Cu, Zn and Hg contents are below the shale average [1]. The low values have possibly originated from the coarse-grained sandy sediments having a low affinity for metals. There are no distinct differences in the metal distributions between the years 2005-2006 in the bay, probably due to low sedimentation rates.

![Figure 1. Sampling stations in the Gökova Bay](image.png)

Reference