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Abstract

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FULL-TEXT ARTICLEEnviron Pollut. 2004 Sep;131(2):323-36.**Sources and remediation for mercury contamination in aquatic systems--
a literature review.**Wang Q¹, Kim D, Dionysiou DD, Sorial GA, Timberlake D.**Author information****Abstract**

Sources of mercury contamination in aquatic systems were studied in a comprehensive literature review. The results show that the most important anthropogenic sources of mercury pollution in aquatic systems are: (1) atmospheric deposition, (2) erosion, (3) urban discharges, (4) agricultural materials, (5) mining, and (6) combustion and industrial discharges. Capping and dredging are two possible remedial approaches to mercury contamination in aquatic systems, and natural attenuation is a passive decontamination alternative. Capping seems to be an economical and effective remedial approach to mercury-contaminated aquatic systems. Dredging is an expensive remedial approach. However, for heavily polluted systems, dredging may be more effective. Natural attenuation, involving little or no cost, is a possible and very economical choice for less contaminated sites. Proper risk assessment is necessary to evaluate the effectiveness of remedial and passive decontamination methods as well as their potential adverse environmental effects. Modeling tools have a bright future in the remediation and passive decontamination of mercury contamination in aquatic systems. Existing mercury transport and transformation models were reviewed and compared.

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