Abstract

The management of urban water resources plays an important role for developing countries. The Tietê and Pinheiros Rivers (São Paulo, Brazil) are affected by domestic and industrial effluents and by the diffuse pollution. This research aimed to quantify 134 variables in the water of Tietê and Pinheiros Rivers (approximately 7,200 and 6,600 analyses, respectively) from August 2007 to December 2008. The idea was to verify if the fact that both rivers are located in the same basin is enough to consider the application of a single management plan for both. Data showed that the rivers presented significant anthropogenic interference. The results suggested that such rivers must be subjected to individual management plans since there were exclusive occurrences (variables that were only detected in one of the rivers). Moreover, there was a statistically significant difference between rainy and dry periods for eleven variables (p*<0.05, ANOVA), reinforcing the special importance of the temporal component within the monitoring program. It is expected that this study subsidize environmental recovery programs in the Tietê River, to which is recommendable to focus on prosecution of illegal wastewater releases, and in the Pinheiros River, to which special attention is suggested to the pollution derived from the pesticides load to the water body.

Keywords

environmental monitoring, metropolitan region of São Paulo (MRSP), urban rivers, water pollution, water quality, watershed management