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WATER BODY CLASSIFICATION BASED ON WATER-SEDIMENT INTEGRATION: STRATEGIES FOR A NEW FRAMEWORK VISION

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RESUMO: Knowledge about environmental variables and the effect of anthropic action on natural resources are important factors in the decision making process in water resources management. This paper aims to integrate sediment and water quality analyzes for urban rivers in order to present an extract of the information needed to classify them, in the context of water bodies framing. The experimental design is based on a monitoring plan over a hydrological year (February, May, August and November) at five monitoring points in the Alto Iguaçu basin (Curitiba and the Metropolitan Region), along the Barigui and Iguaçu rivers. In the sediment analyzes the following parameters were quantified: percentage of organic matter (% MO) and total organic carbon (TOC), total phosphorus (PT), organic phosphorus (PO), inorganic phosphorus (PI), apatitic inorganic phosphorus (PIA), non-apatitic inorganic phosphorus (PINA), total nitrogen (NT) and metals (Cd, Cr, Cu, Ni, Pb, Zn, Ca, Fe, Mg, K, P, Mn and As). Biological oxygen demand (BOD), chemical oxygen demand (COD), PT, total dissolved phosphorus (PTD), orthophosphate (PO_3), NT, nitrate (NO_3), nitrite (NO_2), ammonia nitrogen (NH_3) and metals were analyzed for water. In the end, it is intended to create a new integration tool that represents the river condition based on water-sediment analysis, in order to maintain the quality of water resources, and assistance to managers in decision making in the context of water resources management.

Palavras-chave: Sediment. Water Quality. Classification.

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