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Reflections about water quality based upon conceptual aspects of monitoring and modelling of organic content

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Abstract This paper presents reflections about the water quality conditions of the Iguaçu River in the Metropolitan Area of Curitiba, with special attention to the dynamic of the organic content in the overall watershed. The reason for this analysis is to provide consistent water resources planning and management plan for this complex basin in the context of producing reliable and feasible strategies for water quality recovery. The methodology used in this paper relies on a consolidation of hydrological and water quality data base that allowed the implementation, calibration and validation of a water quality model to achieve the main goal. Additionally, a complementary monitoring plan is proposed to better assess the dynamic of organic content for the river system in analysis. These results summarise the potential positive implications of a strong decision support system to this basin that will certainly induce strategies for the water quality recovery of the river system. Additionally, this paper highlights the main issues of the concepts defined that can be reproduced in other critical basins with strong organic water quality pollution.

Key words Upper Iguaçu Basin; monitoring; water quality modelling