

TITLE:**AUTHOR: Fabiano dos Santos Simões****ABSTRACT**

The fast aquiculture expansion demands an assessment of the environment quality considering the impacts occurred on the water resources. Due to the importance of the fish farming activity in the Assis city of SP state, and the appropriate handling of the natural resources, this study intended to monitor the sub-basins of the Queixada and Macuco rivers to evaluate the impact of this activity and to compare the data obtained with the Pari-Veado sub-basin, where sewage discharger exists. The impact was evaluated by physiochemical and microbiologic analyses, using the Water Quality Index (WQI) and Multivariate Statistical Analysis in the Paranapanema river's tributaries. In most of the sampling sites on the basins with fish farming concentration, the WQI was larger than 52 (Good Quality), even with a significant change of alkalinity, conductivity and solids dissolved total, resulting from the multivariate statistical analysis, demonstrating that WQI doesn't represent reliable value for the interpretation of the water quality resource. The three basins presented different behavior, considering the characteristics of discharges. The Macuco basin receives influence of the urbanization, agriculture and fish farming, while in the Queixada basin the were found anthropogenic activities mainly due to agriculture and fish farming, The fish farming presented characteristic interference through the ions to the aquatic system with alkalinity generation, and contributed to the water course eutrofication process, getting to affect the larger river of the basin, the Paranapanema river.