



Correlation of temperature variation in the southern part of the Atlantic Ocean with the flow of a river in the southern Brazil

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Abstract: The influence of temperature alternations in the southern portion of the Atlantic ocean variability in the flow of a river is important because of the impacts caused by changes in atmospheric patterns. The aim of this study was to evaluate the influence of the variation of the surface temperature of the South Atlantic Ocean during the period 1982-2008, the flow of a river located in southern Brazil. For this study we used a fluviometric station whose daily flow data were obtained from the Hydrometeorological Network of the National Water Agency (ANA) and the Society of Mineral Resources Research / Geological Survey of Brazil (CPRM / SGB). The methodology used to organize the data was linear and polynomial regression (1982-2008), who estimates a conditional expected value, and also the descriptive statistics, which allows to calculate the measures of central tendency and dispersion measures. The statistical analysis in this study indicated that, during the years 1982-2006, with floods in some months. Therefore, the maximum and minimum flow values observed in this study were under the influence of temperature on the surface of the sea according to the results obtained.

Key Words: Flood Management, Flood Risk, Climatic Changes, River