

STATISTICAL ANALYSIS OF THE RUNOFF COEFFICIENT IN THE WATERSHED SEMIARID ENVIRONMENT

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- **ABSTRACT:** *The runoff coefficient of a watershed is a complex integrating the natural relationship between climate type, soil and vegetation. Therefore it is a key concept for characterizing the flow and surface water use and protection against the phenomena caused by their displacement. Thus, the search for an adjustment of the coefficient, the number of runoff (C) the basin of Jacu stream in Serra Talhada-PE is justified by the fact that a high sediment production rate and low vegetation. A time series nonlinear model GARCH can be useful to understand semiarid hydrology. The stage and a rain gage from Jacu watershed linked with data logger were used to register the rainfall and also discharge. The analyses this data to show that GARCH model adjusted to residual of an ARMA model becomes more powerful properly represent the conditional heteroscedastic of a hydrologic Brazilian semiarid time series.*
- **KEYWORDS:** *Time series models; GARCH model; surface water.*

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