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Identifying micro-regions of Paraíba state with tendency to desertification process

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RAINFALL TIME SERIES FROM PARAÍBA STATE LOCATIONS WITH, AT LEAST 80 YEARS LONG, FOR THE ANNUAL AND RAINY AND DRY SEASONS TOTALS WERE USED WITH THE FOLLOWING OBJECTIVES: DETERMINING THE TIME SERIES TENDENCY; ELIMINATING THE HIGH FREQUENCY TIME SERIES VARIATIONS, BY MEAN OF A THIRD ORDER MOVING AVERAGE FOR FILTERING THE INFLUENCE OF THE EL NIÑO PHENOMENON ON THE STATE RAINFALL; VERIFYING THE STATISTICAL SIGNIFICANCE OF THE TIME SERIES TENDENCY FOR THE TOTAL PERIOD (1911-2000) AND (1911-1953) AND (1953-2000) SUB-PERIODS. THE RESULTS SHOWED THAT ONLY THE FOLLOWING LOCATIONS SHOWED ANY KIND OF RAINFALL REDUCTION TENDENCY THROUGHOUT THE YEARS, FOR THE 0.01 AND 0.05 SIGNIFICANT LEVELS: MAMANGUAPE, AT THE NORTH OF THE STATE COASTAL MICRO-REGION, PRESENTS A SMALL AND NOT SIGNIFICANT REDUCTION OF RAINFALL AT THE 0.05 AND 0.01 SIGNIFICANCE LEVELS; CUITÉ, AT THE CURIMATAÚ MICRO-REGION, PRESENTS A STRONG NEGATIVE TENDENCY, THAT IS, AN EXPRESSIVE REDUCTION OF ANNUAL RAINFALL THROUGHOUT THE YEARS, WHICH IS SIGNIFICANT AT THE 0.05 AND NOT SIGNIFICANT AT THE 0.01 PROBABILITY LEVEL; MONTEIRO, AT THE CARIRÍ MICRO-REGION, SMALL BUT NOT SIGNIFICANT NEGATIVE TENDENCY, THAT IS, A NOT SIGNIFICANT REDUCTION OF RAINFALL THROUGHOUT THE YEARS AT 0.05 AND 0,01 SIGNIFICANCE LEVELS; SÃO MAMEDE, AT THE SERIDÓ MICRO-REGION, PRESENTS STRONG AND SIGNIFICANT TENDENCY TO THE SEMI-DESERTIFICATION PROCESS; CATOLÉ DO ROCHA, AT THE STATE HINTERLAND MICRO-REGION, PRESENTS SLIGHT AND NOT SIGNIFICANT TENDENCY TO REDUCTION OF RAINFALL THROUGHOUT THE

YEARS.