

## **GEOINDICATORS USE FOR EVALUATION OF THE CONDITIONS OF USE OF THE LAND IN THE WATERSHED OF RIBEIRÃO ANTÁRTICO, NOVA XAVATINA - MATO GROSSO, BRAZIL.**

1ROSSETE, A.N., 2 CASSIANO, A.M., 3 SANTOS, R.F dos. UNEMAT, Nova Xavantina, Brazil; CRHEA-EESC/USP, São Carlos, Brazil; UNICAMP, Campinas, Brazil.

The disorganized occupation of the central-eastern Brazilian savannah, accomplished in a more intense way from the early 70's has been resulting in serious problems of exhaustion of the natural resources, especially the soil. Due to the necessity of new environmental planning ways that incorporate the state of the environmental conditions in face to the human occupation, it was aimed in this work to develop a methodology of surveying of the erosive processes, making use of geoindicators destined for areas occupied by agro-ecosystems. The work was realized in an area of approximately 180Km<sup>2</sup>, in the watershed of Ribeirão Antártico, municipal district of Nova Xavantina, Mato Grosso, Brazil. For the survey of the characteristics erosives (location and magnitude of these geoindicators) the interpretation of images of the Landsat5-TM and field observations was used. These digilized information were introduced in SPRING, a software of treatment of geographical information, and then they on were interpolated properly and pondered. With the purpose of aiding the environmental planning of the area, the database were classified in erosion classes, being produced in the end of the work land quality map. It can be verified in this work that the areas with the largest degree of degradation of the land are in areas where the management of the soil is inadequate and the use of the land fact in an intensive way.