

## **Geoenvironmental mapping of the Guaíba hydrographic basin, State of Rio Grande do Sul, Brazil**

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Geoenvironmental mapping of the Guaíba hydrographic basin at a 1:250 000 scale, is underway, based on analysis of TM – Landsat 5 satellite maps, bands 3, 4 and 5, complemented with geological, geomorphological and pedological information. The basin was been divided into domains and sub-domains according to the dissection degree and of the lithological units involved.

Within each domain and sub-domain, the analysis of attributes such as relief, drainage density, textural type, tone and degree of structure has permitted the delimitation of homologous zones. Field checking of slope-type, ground usage and occupation, erosion, water table, depth to bedrock, and others enabled the grouping of areas, with similar responses to human intervention.

Each of the delimited homologous zones has been evaluated in terms of urban occupation, road works, pipe-line, distribution of residual soils and farming. The attributes considered on determination of the degree of restriction to these intervention types have classified as high, moderate and low according to characteristics of the soil/bedrock, relief, hydric/hydrological characteristics and geological resources.