

A GEO-ENVIRONMENTAL DATA BASE DUE TO ELABORATE A GEOINDICATOR SCENARIO OF SÃO PAULO STATE BASED ON ENGINEERING-GEOLOGICAL CRITERIA

Diniz, N. C.

This paper will presents an Geo-Environmental Database project using GIS technology and Object-Oriented methodology to elaborate the geoindicator scenario of São Paulo State, Brazil using the Engineering-geological. The engineering-geological mapping of urban and regional areas can be considered as a tool to extract indicators of environmental problems and changes. The engineering- geological map should be updated due to the modifications of human interventions on physical environmental. The Geo-Environmental Database can supported by GIS for environmental evaluation of complex and accelerated land use dynamics. A challenge facing environmental managers and planners is that while the potential for matching current understanding to regulatory need has not been realized, environmental degradation due to cumulative effects continues grow. Geoindicators can be understood like high-resolution measures of short-term changes in the geological environment, which are significant for environmental monitoring and assessment. The development of Geo-Environmental Database in IPT, through automatization of the engineering-geological mapping is the objective of a long process, with many projects, that has been done since 1992, represented by GAIA - Manager System of the Geo-Environmental Database of So Paulo State. The target of the project was to construct: a digital spatial cartographic base; physical environmental hazards maps; technological hazards maps; Conservation Units spatial data; alpha-numeric data bank; image bank; multimedia; and GIS applications for environmental management and hazards monitoring.