

## **The importance of physical environment information to support metropolitan areas planning: the example of Porto Alegre , Rio Grande do Sul State, Brazil.**

<sup>1</sup>ORLANDI FILHO, V. and <sup>2</sup>GIUGNO, N.B. <sup>1</sup>Geological Survey of Brazil – CPRM, Porto Alegre, Brazil; <sup>2</sup>METROPLAN, Porto Alegre, Brazil

The Metropolitan Area of Porto Alegre comprises 26 municipalities, over approximately 7,200 km<sup>2</sup>, corresponding to 2.5% of the area of the Rio Grande do Sul State. The metropolitan population, of about three million inhabitants, corresponds to 1/3 of the population of the state and is responsible for 1/3 of the state's GDP. In the last decade, the regional population growth rates have been superior to those recorded in the state and even in the whole country. This quick population increase caused a disordered process of urbanization, resulting in the occupation of inadequate and even environmentally sensitive areas. The Technical Programme for the Management of the Porto Alegre Metropolitan Area – PROTEGER included multithematic analysis with emphasis on geology, hydrology, hydrogeology, water availability, geomorphology, soil, vegetation and land-use. The results of this study, presented in 49 reports, allowed the delineation of areas susceptible to natural disasters; the production of guidelines for territorial and municipal management plans and river basin management; the selection of areas for waste disposal and for industrial settlement; the monitoring of waste effluents; and the indication of areas for mining activities.