

Pedologic survey and useful interpretations for environmental planning of Rio de Janeiro County

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An updated semidetalled soil map was made as part of a project of land suitability interpretations for horticulture and reforestation as well as for, vulnerability and environmental quality of the lands, seeking to subsidize the environmental planning of the County. The relief is constituted basically by three great well-known crystalline massifs such as Tijuca, Pedra Branca and Gericinó and by the sedimentary coastal plain comprised by Jacarepaguá, Sepetiba and Guanabara bottomlands. The massifs have a predominance of pré-cambrian gneiss rocks, of varied constitution, penetrated by intrusive granitic and alkaline rocks. Those factors have great influence on soil characteristics and distribution. To aid the interpretation phase, the county area was divided into high lands, due to erosion susceptibility, and low lands, due to its drainage condition. The susceptibility for reforestation prioritized the rolling areas subject to land sliding and the aptitude for horticulture at the bottomland areas of the west zone, which are still under agricultural use. The vulnerability of the lands evaluated the environmental fragility according to urban and agricultural growth. The environmental quality was obtained through out digital map overlay on a GIS (Geographical Information System) environment, crossing vulnerability data with current land use. It was also considered the pressure level that the man made actions exercises upon the natural attributes and how the environment react under these pressures.