

CHARACTERIZATION OF THE COASTAL AQUIFERS OF THE OCEANIC AREA OF NITERÓI, RIO DE JANEIRO, BRAZIL

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The disordered process of urbanization of the Oceanic Area of Niterói, Rio de Janeiro, Brazil, associated to lack of a public water supply and a sanitary system are degrading its water resources, so the contamination by the domestic effluents, as the salinization caused by the saline intrusion. The objective of this work is to study the quality of the groundwater of the area based on bibliographical review, field work and chemical analysis. It represents the partial MsC. and Phd thesis carried out on Department of Geology of Federal University of Rio de Janeiro, under sponsorship of Brazilian government agencies (PADCT III / FINEP: Project ACOSTRIO). The characterization of the saline intrusion was accomplished through profiles perpendicular to the beaches of Piratininga, Cambinhas and Itacoatiara where several wells were cataloged. Measures of water table, depth, pH, conductivity and temperature were accomplished, followed by the water sampling for subsequent analysis of chloride and conductivity in laboratory. The contamination of the aquifers by the domestic effluents was carried out through bibliographical revision and by bacteriological and physico-chemical analyses in wells of the water authorities of Niterói and residences. The results of the work indicated that, the salinity of the water varied with the proximity of the coast, with the depth and with the stratigraphic and geomorphological features. In the case of the bacteriological contamination, most of the wells of the area presented contamination.