

GROUNDWATER MANAGEMENT - NITERÓI, RIO DE JANEIRO STATE, BRAZIL

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Public water supply deficiency leads to the inhabitants of part of the Niterói Municipality have their necessities provided only by groundwater. It is a coastal area, with high demographic growth index. The groundwater is extracted from two kinds of aquifers: fractural type, present in the Precambrian rocks and the porous one, in the quaternary marine and fluvial sediments. Disordered urban occupation on the plains and mountain slopes, reduced the recharge areas and brought vulnerability to the aquifers. Local overexploitation is already observed as well as saline-water intrusion in the areas nearest to the sea, caused by overpumping of wells. This situation becomes worse in the absence of sewage collection and treatment systems. The project has as main objective to guide the Prefecture with relation to the groundwater management complied with the suitable occupation and use of the soil. The project comprises: (a) inventory of the deep wells; (b) implementation of the database in the software GWW - Groundwater for Windows; (c) identification of the aquifers and elaboration of hydrogeologic map; (d) collection of data of water consumption; (e) identification of the potentially contaminant sources; (f) characterisation of the water quality; (g) identification of preservation areas, with the purpose of protecting the recharge of aquifers; (h) execution of a program of environmental education with the resident population; and (i) proposal of municipal legislation. The project was started in 1998 and developed by Departamento de Recursos Minerais - with resources of Fundo Estadual de Conservação Ambiental - FECAM.