

Environmental analysis of degradation of the Piratininga's Lagoon, Rio de Janeiro State, Brazil

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The Piratininga's lagoon, Niterói (RJ), is suffering an accelerated process of degradation. The causes are related to the lack of infrastructure, disorganized urbanization and related factors such as poverty, unemployment and lack of environmental consciousness. The disposal of domestic effluents in the lagoon, associated with burnings, deforestation and modifications in the drainage system, reduced the original dimensions, and incremented the processes of sedimentation and eutrophication. In the absence of financial resources to build a sewage collection and treatment station, several options have been suggested, without any success. Taking into account the trend of deterioration of the conditions, and the scarcity of studies about the structure and the functioning of the system, an environmental analysis with emphasis on geological factors has been conducted. The methodology of analysis used was the Multicriteria Aid Decision. The information was processed through a mathematical method of evaluation, and submitted to a sensitivity analysis. The study was comprised out in three phases, beginning with the definition of its slope, through both the bibliography and the opinion of specialists of several scientific areas, local residents and authorities. To structure the problem a family of criteria representing the objectives desired and a group of actions to achieve them were selected. The work concluded by electing the environmental zonation as the most important action to be implemented.