

4th International Conference on **Pollution Control & Sustainable Environment**
&
6th Edition of International Conference on **Water Pollution & Sewage Management**
July 26-27, 2018 Rome, Italy

A quantitative analysis of the extent of anthropogenic influence on ground water pollution in douala, cameroon

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Groundwater is the earth's most important water resource. About two billion people depend directly on aquifers for drinking water, and 40 percent of the world's food is produced by irrigated agriculture, mostly of groundwater. Groundwater pollution is a major issue because aquifers are inherently susceptible to contamination from anthropogenic impacts (Thirumalaivasan *et al.*, 2003). Because groundwater pollution takes decades or to manifest, it is difficult and expensive to technically remediate an aquifer once it is polluted (Morris *et al.*, 2003). Douala, the most populated city in Cameroon depends heavily on groundwater for livelihood. Basic sanitation in this city has not been matched by rapid urbanization within the last 2 decades (Eneke *et al.*, 2011). Only 2.16% of the 3 million inhabitants access pipe-borne water (Guévert *et al.*, 2006), making groundwater all the more important in Douala. This study aimed at evaluating the susceptibility of groundwater in Douala to pollutants from anthropogenic sources, with specific objectives to:

- Identify potential anthropogenic sources of groundwater pollution in the study area.
- Determine the chemical and microbial quality of groundwater in the study area.
- Propose suitable measures to reduce anthropogenic sources of groundwater pollution.

Methodology:

- Survey to identify potential waste sources, being Dump sites, various workshops, industrial and domestic effluent spots.
- Sampling of 50 randomly selected wells for chemical and microbial analysis to determine the quality of the water.

The research shows that 80% of the city's inhabited area is contaminated. The first step in the prevention of further pollution of groundwater from anthropogenic sources is participatory sensitization of pollution prevention.

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