



Title: Alteration of the Aquifer Water in Hyperarid Climate, by Wastewater: Cases of Groundwater from Ouargla (Northern Sahara, Algeria)

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Abstract: The present study is registered, on the area of Ouargla (the Sahara septentrional, Algeria) reports of the aquifer contamination by the anarchistic urban rejections. By its geomorphology (basin), its hyperarid climate and the presence of chotts, the area is subjected to an important degree of vulnerability, encouraged by the discharges of wastewater (domestic and irrigation). These factors expose aquifer's water to a severe pollution. In order to evaluate this pollution, a regular monitoring of the quality of aquifer's water and the collecting canal's water, was conducted over seven months (January- July 2005). The statistical processing, the space-time chart and the calculation of pollution index of physicochemical, organic and bacteriological analyses data, made it possible to identify the behavior of these parameters according to the temperature, evaporation and salinity. The complementarity of the results shows that aquifer's water is exposed to a permanent danger, degrading the environment. The situation imposes possible solutions, by optimization of a wastewater treatment process meets the standards required, based on a combined treatment (biological and physicochemical).