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Identification of some water quality parameters of the liquid effluents discharged from recent urbanization

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Algeria has established a growing urban pole, therefore urbanization and urban dynamics are increasing from year to another, and it occurs a flow of excessive urban wastewater discharges from these agglomerations.

In this research, we are interested in the evaluation of the current state of wastewater, which comes from 1114 residences by household activities and human metabolism, or the mixing of domestic wastewater with water runoff.

In the extreme North east of Algeria, the predominantly domestic waters of Drâa-Errich city, evacuated through collectors and without treatment they are rejected in nature, and the quality of the water at the level of the Gueridjima wadi has deteriorated and these waters currently constitute a polluted effluent which joins the waters of the El Aneb wadi to the west.

A set of analyzes was carried out (period of April to May 2021) on domestic wastewater to assess their quality.

Sampling and analysis carried out of surface water (02 samples from Gueridjima wadi and 02 samples from El Aneb wadi) and groundwater (01 well), covering an area of 15 km.

The physic-chemical parameters measured with the WTW multiparameter are pH, temperature, electrical conductivity EC, biological demand in oxygen BOD_5. In addition, the undesirable substances are Nitrates (NO_3^-), Nitrites (NO_2^-), Phosphates (PO_4^-), and orthophosphate.

In front of this situation, the measures proposed are the systems for treating domestic wastewater sewage, seen the advantages represented by the topography of the land in the region; remains the better solution for possible reuse recovery of wastewater, in agriculture sector. This measure will certainly improve the quality in terms of production of an acceptable quality of (purified) wastewater, and reduce environmental problems

Keywords: current state - domestic wastewater - sewage - admissible quality.