Hydrochemical characterization of alluvial aquifer of Tebessa-Morsott. Eastern Algeria

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Abstract
A study of the hydrogeochemical processes in the Tebessa-Morsott aquifer was carried out with the objective of identifying the geochemical processes and their relation with groundwater quality as well as to get an insight into the hydrochemical evaluation of groundwater. The high salinity coupled with groundwater level decline pose serious problems for current irrigation and domestic water supplies as well as future exploitation. A combined hydrogeologic and hydrochemical investigation have been carried out using chemical data to deduce a hydrochemical evaluation of the aquifer system based on the ionic constituents, water types, hydrochemical facies and factors controlling groundwater quality. The increase in salinity is related to the dissolution and/or precipitation processes during the water-rock interaction and to the cationic exchange reactions between groundwater and clay minerals.