

Interactive comment on “Salinization origin of Souf Terminal Complex: Application of statistical modelling and WQI for groundwater management” by Hafidha Khebizi et al.

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During the last 30 years, the region of El-Oued knew an upwelling in the water levels of the surface water table. The consequences of this phenomenon are fatal for the man and the environment. We note the flooding of palm groves, the pollution of the surface water table, the deterioration of the living environment of the inhabitants and the progressive change in land use. The authors have applied the statistical modelling using multivariate analysis, and the Water Quality Index, to evaluate the groundwater variables by the investigation of water samples collected from 25 boreholes, in 16 May 2018. In their conclusion the authors have strongly recommended to close the wells

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that intersect the evaporitic layers and minimize the pumping of groundwater from the terminal complex in the southwestern part of the Souf, as the groundwater requires pretreatment before supply. In my opinion, the methods proposed in the paper are questionable (multivariate analysis for limited sample) and the reported validation is far too weak for convincing the reader that they are reliable (the size of the sample). Compared to the doctoral thesis of BOUSELSAL Boualem, publicly defended at the University of Annaba (Algeria) in 2016, the article did not present any novelty or solution to existing problems. The article is an extended summary of the doctoral thesis of BOUSELSAL Boualem. BOUSELSAL Boualem in his thesis performed three measurement companies. The authors of the article performed only one company with results similar to the doctoral thesis. The rest of the work is well inspired and translated from the thesis.

You will find attached the PhD thesis of BOUSELSAL Boualem.

<https://biblio.univ-annaba.dz/wp-content/uploads/2019/07/These-Bouselsal-Boualem.pdf>

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