

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

Hafidha Khebizi

h.khebizi@ensh.dz

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The new concept of the preferential dissolution corridors introduced, for the first time in the Lower Sahara aims to better interpret the Terminal Complex sandy groundwater salinization in Souf and the implications on the overlying aquifers. This new concept can be a real progress in the understanding of the underground hydrodynamics and hydrochemistry. It is supported by a good understanding of the climatological, the geomorphological and the geological context of the region on the basis of a selective water sampling of a well-defined area and allows in the future to: 1- better understand the relationship between the water salinization, the hydrodynamics of the groundwater and

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the different geomorphological saharan aspects, in particular the fossil wadis (subsurface groundwater) and the chotts and sebkha. 2- better understand the implications of the subterranean dissolutions of evaporitic and salty rocks, on soil and also on the rise in the static level of the watertable. 3- develop a new strategy for a better management of water resources by introducing a new drilling programmes for drinking water supply and irrigation. This new concept is only the beginning of a new approach research in the region for the interpretation of underground hydrodynamics and hydrochemistry. A multidisciplinary geological, structural, geophysical studies and study of fluid mechanics, microbiology and other sciences would be essential in the future to benefit from this new concept and to better understand similar natural phenomena in other areas in the world.

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