

# Review of: "Saltwater Intrusion in Coastal Aquifers: A Comprehensive Review and Case Studies from Egypt"

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Potential competing interests: No potential competing interests to declare.

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**Object:** Review the manuscript

For the Editorial board of Qeios

Hello,

I am giving you the reviewed manuscript entitled: Saltwater Intrusion in Coastal Aquifers: A Comprehensive Review and Case Studies from Egypt). The decision is accepted after minor revision.

This paper complies with the Qeios journal guidelines, as well as the objectives, methodology, results, and conclusions of the aquifers impacted by saline intrusions. For this reason, I fully endorse the acceptance of the paper for publication with a citation in the subject and some improvements due to the lack of data and some diagrams.

For example, there is a lack of critical data and information mainly concerning the geological structure and hydrogeological conditions of the study area, such as: (i) location on a map, (ii) a geological map, geological sections, or profiles, (iii) clarification on the hydrogeological regime of the aquifer system(s), which are considered necessary to better understand the elements of the conceptual model of the study area, such as: type of aquifer system(s), definition of existing boundary conditions, transmissivity (T), hydraulic conductivity (K), and storage (S) values, (iv) piezometric maps, hydrochemical maps, and diagrams (chloride distribution, specific electrical conductivity, Revellé, Piper values, etc.).

The geophysical and remote sensing methodologies used are very appropriate for this research on coastal and ocean salinity. The strengths of these coastal investigations for Egypt are very useful for understanding the evolution of marine intrusions in the fresh waters of the Nile Delta and the eastern coasts of Egypt. The weaknesses are really few, but they are detailed in the full text.

Modern computer and information technologies can be applied for the assessment, evaluation, and analysis. Several Sea Water Intrusion (SWI) case studies around the world are published and available (please see the one by me below). The author's list of references can be elaborated in more detail to enrich the overall content of the article.

Nadjla, B., Abdellatif, D. & Assia, S. Mapping of the groundwater vulnerability to saline intrusion using the modified GALDIT model (Case: the Ain Temouchent coastal aquifer, (North-Western Algeria)). *Environ Earth Sci* 80, 319 (2021).  
<https://doi.org/10.1007/s12665-021-09614-6>

Please, in this context, give me the review attestation from the multidisciplinary Open Science platform **Qeios** as an administrative task. Many thanks for your assistance.

Cordially,

Dr. DEHNI Abdellatif