

Salt Water Intrusion into the Tertiary Aquifers in North Qatar Peninsula, Arabian Gulf

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ABSTRACT

The State of Qatar is located in an arid zone and is surrounded by seawater from three directions North, East and West. Therefore, Qatar as a peninsula is suffering from salinization of groundwater in its coastal zone as most of the similar coastal areas in the world.

The excessive pumping and overexploitation of the limited groundwater resources resulted in a remarkable deterioration of groundwater in terms of quality and quantity due to the ingress of saline water into the two main carbonate aquifers.

This research was an effort focussed on the mitigation of groundwater problems in a farming zone in north Qatar due to saltwater intrusion. Geological, hydrogeophysical and hydrochemical investigations were conducted along two profiles more or less parallel in an area at the eastern coastal side of the country.

Special emphasis was paid to monitor saltwater intrusion phenomena in the study area, to make a historical review and comparative study to determine whether the problem is increasing or decreasing further, and to identify the influence of saltwater intrusions on the aquifers sustainability.

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