Saline contamination and its mitigation in groundwater at a coastal watershed, north-east Tunisia

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We investigated surface water and groundwater interaction under a saline contamination due to oil field brine and sea water intrusion by using tracer hydrological approach, geophysical approach and numerical simulation approach at a coastal watershed facing Mediterranean sea, north-east Tunisia. We present dynamics of groundwater flow and saline contaminants behavior, and propose a mitigation way of saline contamination by artificial groundwater recharge using a treated domestic waste water based on a numerical simulation.

Keywords: saline contamination, oil field brine, sea water intrusion, groundwater and surface water interaction