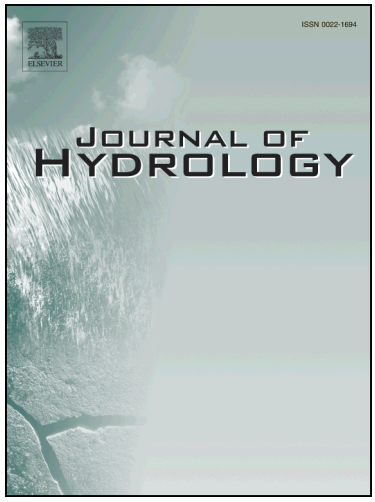

Research papers

Groundwater-surface water interactions derived by hydrochemical and isotopic (^{222}Rn, deuterium, oxygen-18) tracers in the Nomhon area, Qaidam Basin, NW China

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Groundwater-surface water interactions derived by hydrochemical and isotopic (^{222}Rn, deuterium, oxygen-18) tracers in the Nomhon area, Qaidam Basin, NW China

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Abstract:

Understanding the interaction between groundwater and surface water is of vital significance for the sustainable management of water resources in arid and semi-arid areas. In this study, multi environmental tracers (hydrochemical parameters, stable hydrogen and oxygen isotopes and radioactive ^{222}Rn) were employed to investigate the interaction between groundwater and surface water along two rivers (Tiangeli River and Nomhon River) in the Nomhon area, southeast of the arid Qaidam Basin, northwest China. Here we observed that the ^{222}Rn concentration of waters were distinctly different with a decrease order of groundwater>spring>river in this area. Along the Tiangeli River, the ^{222}Rn concentrations of groundwater, springs and river