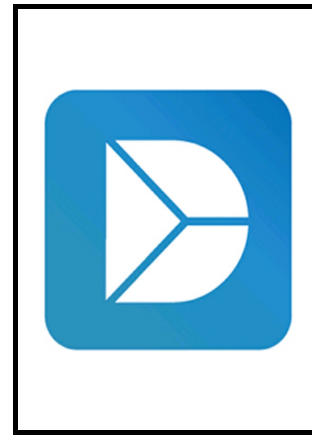# Author's Accepted Manuscript

Data on Nitrate-Nitrite pollution in the groundwater resources a Sonqor plain in Iran

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Data article

Data on Nitrate-Nitrite pollution in the groundwater resources a Sonqor plain in Iran

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Abstract:

Nitrate is a groundwater pollutant which in higher concentrations limits, leads to health hazard such as Methemoglobinemia and formation of nitrosamine compounds. In this research, the nitrate and nitrite concentrations in all water resources in the villages of Songor plain were determined and the relationship between these values with the water table and zonation of nitrate concentration were investigated in the GIS environment. In this study, 37 samples of all groundwater resources of Sonqor plain were taken in, high water (March 2016) and low water (October 2017) periods. Water nitrate levels were then determined by spectrophotometry and results compared with national standards of Iran and analyzed by SPSS. Finally, the concentration distribution mapping was carried out in GIS environment and the factors affecting nitrite changes were analyzed. Nitrate concentration of water resources of Sonqor plain was fluctuating at 3.09-88.5 mg per liter. In one station, nitrite concentrations in the high (88.5 mg/liter) and low (71.4 mg/liter) water seasons were higher than the maximum limit. Low thickness of alluvium, the site of wells in the downstream farmlands, the farming situation of the region, nitrate leaching from agricultural soils and wide use of nitrogen fertilizers in agriculture were considered as the causes of the pollution in one station. Though the average concentration of nitrate and nitrite are not high in this region, but because of problematic consequences of high nitrate concentrations to human health,