Main theme	Sub - Theme	Code Number
Natural Resources	GIS	14

Study Name	**GIS for analyzing Groundwater Data in the Azraq Basin-Jordan**
Author	Rida Ali Nejem Al-Adamat
Date of Study	1996
Objectives	This research aimed to study the relationship between land topography and groundwater level. Likewise , the effects of land topography and land geology on the concentration of TDS, NA, CL, NO3, SO4, Mg and pH in the groundwater.
Output and Recommendation	The research was carried out on part of Azraq Basin, Jordan. The study are extends form Syrian boarder in the North to the town of Azraq in the South. The relationship between land topography and groundwater level was found proportional. The relationship between land topography and TDS, Na, Cl and Mg was inverse proportional. There was no relationship between land topography and pH and NO3 concentration in water. Furthermore, the relationship between land and TDS, Na, CL and Mg showed that their concentration in water is less in Basaltic aquifer that that in Rijam aquifer.
Development Aspects	• Jordan lies in an arid zone where most of its land receives low rainfall which most of it is lost due to evaporation. • Groundwater is a major source of water in Jordan for domestic, agricultural and industrial purposes. • Groundwater in Jordan should be evaluated using GIS techniques • In order to achieve that we should have all the required data that might help us in studying, monitoring, and protecting the quantity and the quality of groundwater in Jordan. • Further studies needed to be tackled in groundwater by using GIS techniques in Jordan.
Remarks	A dissertation submitted for the partial fulfillment of M. Sc. Degree in Geographical Information for Development in the Department of Geography, University of Durham https://doi.org/10.1016/j.gsd.2018.03.011