



Karst Aquifer in Qatar and its bearing on Natural Rainfall Recharge

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Qatar is an arid country with little rainfall and high evaporation. Surface water is non-existent so aquifer is the only source of natural water. The annual long-term averages of rainfall and evaporation are 80 mm and more than 2000 mm, respectively. Despite the low rainfall and high evaporation, natural recharge from rainfall occurs at an average of approximately 50 million m³ per year.

Rainfall recharge in Qatar takes in land depressions that occur all over the country. These depressions are a result of land collapse due to sinkholes and cavity in the limestone formation. In the northern part of the country, karst features occur as a result of dissolution of limestone, which leads to land depressions.

Results of this study shows groundwater recharge occurs in land depression areas, especially in the northern part of the country, where surface runoff accumulates in these land depressions and recharges the aquifer.

This paper was made possible by NPRP grant # [NPRP 9-030-1-008] from the Qatar National Research Fund (a member of Qatar Foundation). The findings achieved herein are solely the responsibility of the author[s].”