



## **an integrated GPR and 2D electrical imaging study to estimate groundwater salinity**

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Ground Penetrating Radar (GPR) has recently a large contribution in the field of hydrogeophysics. Many hydrogeophysical studies used GPR technique not to detect water table only, but is used successively also to estimate some hydraulic and petrophysical parameters. Among these estimated parameters are volumetric water content, porosity, and hydraulic conductivity. Up till now, no attempts have been realized to estimate groundwater salinity utilizing GPR techniques.

In the present study GPR profiles and 2D multi-electrode profiles are processed to estimate dielectric constant, water content, water saturation, and porosity. From these parameters groundwater salinity is estimated. The estimated salinity values show a fairly good agreement with the measured ones.