



Determining Ground Water Quality for Irrigation in Varahanadhi River Basin, Tamil Nadu, India

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Abstract: Identifying polluted areas using groundwater quality index is a prerequisite for sustainable water resource management. An attempt has been made in this study by overlay various irrigation water quality parameters to identify the irrigation water quality index (IWQI) using GIS for the Varahanadhi river basin of Tamil Nadu. Secondary data and relative weights for each parameter using standard value were adopted. High salinity and low sodium hazard class (C3-S1) based on Wilcox plot, Gibbs plot indicates hydro geochemistry is controlled by rock water dominance. Northern and southern parts are suitable meanwhile north eastern parts of the basin are unsuitable for agriculture activities and accounts for 20 and 30 percent of pre and post-monsoon samples respectively.

Keywords: GIS, Wilcox, SSP, MAR, IWQI
