

## **GIS based assessment of ground water for domestic and irrigation purpose in Vazhapadi Taluk, Salem, Tamil Nadu, India**

P.S.Kumar <sup>1</sup> and Balamurugan.P <sup>2\*</sup>

<sup>1</sup>Department of Civil engineering, University College of Engineering, Ariyalur Campus, Ariyalur.

<sup>2\*</sup>Department of Civil Engineering, Dhirajlal Gandhi College of Technology, Salem.

Email: [balamurugan.phd10@gmail.com](mailto:balamurugan.phd10@gmail.com)

### **Abstract**

In the current scenario, application of remote sensing and GIS has been widely increased in the assessment of water quality. The main aim of this study is to investigate the nature of groundwater and its suitability for domestic and irrigation purpose in Vazhapadi Taluk, Salem district. 50 sample locations are selected in the study area and analyzed for 12 basic water quality parameters. The physio-chemical properties are also compared with standard regulations. Based on the detailed investigation in terms of water quality index map is developed using GIS, it is predicted that some sample locations are in need of primary degree of treatment for domestic usage. The studies also reveals that majority of groundwater samples are suitable for irrigation purposes.

**Key words –GIS, Groundwater, Irrigation, Water Quality Index**