

Groundwater Potential Zone Classification Using Geospatial Approach

Title	Groundwater Potential Zone Classification Using Geospatial Approach
Author Order	3 of 3
Accreditation	2
Abstract	<p>Groundwater is an important process in the watershed hydrological system. Serayu watershed, the largest in Central Java Province, has bio-physic spatial variability that influences groundwater recharging. The aim is to derive the groundwater potential zone of the Serayu watershed. Five thematic maps used and applied for groundwater potential analysis, were lithology, land use land cover, lineament density, drainage density, and slope gradient. Distribution of Lithology data, Digital Elevation Model (DEM), and Landsat 8 image were analyzed to thematic raster with 1 x 1 km resolution. Weighted index was calculated regarding the relation of five influence parameters then were overlaid and calculated by using QGIS-calculator. Groundwater classified into five categories, namely poor, low, moderate, good, and very good. Based on the final groundwater potential map, 0.02% of 3,727 km² is poor category, however most of Serayu watershed have moderate to good (48.77 and 29.77 %, respectively). The percentage of very good (10.57%) and low (10.87%) classes were rather similar. Spatial variability of groundwater distribution indicates the complex characteristics of the Serayu watershed, so more serious attention from the perspective of research and management of water resources in the future, is needed.</p> <p>Keywords: Groundwater, Multi-criteria, QGIS, Recharging, Serayu watershed.</p>
Publisher Name	The University of Lampung
Publish Date	2023-04-02
Publish Year	2023
Doi	DOI: 10.23960/jtep-l.v12i2.288-301
Citation	
Source	Jurnal Teknik Pertanian Lampung (Journal of Agricultural Engineering)
Source Issue	Vol 12, No 2 (2023): June 2023
Source Page	288-301
Url	https://jurnal.fp.unila.ac.id/index.php/JTP/article/view/6362/pdf
Author	Dr ARDIANSYAH, S.TP, M.Si