

Using the Geographical Information System (GIS) and Remote Sensing Techniques for mapping the groundwater potential zones in Kg Timbang Dayang, Kota Belud, Sabah

ABSTRACT

The growing demand for groundwater is due to several reasons such as the increment of population, agriculture, pollution, industrialization and urbanization. This study aims to map the groundwater potential zones by using the Geographical Information System (GIS) with remote sensing techniques in the study area. The study area is located at Kg Timbang Dayang and its surrounding at Kota Belud, Sabah. Eight parameters were studied that affect the occurrence of groundwater in the study area. Those parameters are obtained from existing maps, remote sensing imagery and associated databases. The parameters are; lithology, rainfall distribution, drainage density, lineament density, soil types, elevation, slope steepness and landuse. All these parameters will be used to create the thematic maps based on the given weightage values. Finally, all the thematic maps will be integrated to produce the final groundwater potential map of the study area. The groundwater potential map is classified into three categories which are low, moderate and high.