Estimation of Natural Groundwater Recharge Using Chloride Mass Balance in the North Kelantan River catchment

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Abstract
Knowledge of natural groundwater recharge rates, which is infiltrates and percolates from precipitation through soils and sediments, is necessary factor for evaluating and considering hydrogeological and environmental issues. Chloride Mass Balance (CMB) was tested for estimating groundwater recharge at the site, Kelantan Province, Malaysia. Estimates of deep percolation using CMB method range from 17 to 30 percent of precipitation (between 475 and 769 mm/y) in the study area. The difference between two boundary of recharge (upper boundary: 30% and lower boundary: 17%) is due to some factors such as difference geologic materials of the present study area.

Keywords: Chloride Mass Balance, Recharge Estimation, Groundwater, Malaysia