

## Surface and groundwater quality of ex-promontory land of Carey Island, Malaysia

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This paper focused on the quality of surface and groundwater at the ex-promontory-land of Carey Island in Selangor, Malaysia, to study the effects of salinity and agricultural activities on groundwater aquifers. Groundwater quality was measured regularly by using ion chromatography from November 2010 to April 2012. High amounts of Na<sup>+</sup> (6377 mgL<sup>-1</sup>) and Cl<sup>-</sup> (10,643 mgL<sup>-1</sup>) showed that seawater intrusion has occurred. High amount of nutrients such as NH<sub>4</sub><sup>+</sup> (36.06 mgL<sup>-1</sup>), PO<sub>4</sub><sup>-</sup> (647.61 mgL<sup>-1</sup>), NO<sub>2</sub><sup>-</sup> (13,543 mgL<sup>-1</sup>) and NO<sub>3</sub><sup>-</sup> (33.82 mgL<sup>-1</sup>) were also found in the groundwater indicating long term fertilizers application on the land. Other physical parameters such as total dissolved solids, pH, conductivity and water table were also determined to trace out the groundwater quality trends.

### Biography

Zubaidah Ismail is an Associate Professor lecturing Engineering Mathematics in the Civil and Environmental Engineering Department, University of Malaya. Zubaidah obtained her BA(Hons) (Maths) from State University, New York in 1985, MA (App Maths) from Temple University, Philadelphia in 1987 and Ph.D. in Civil Engineering from University of Malaya in 2005. Her fields of interest are in Structural Dynamics, Environmental Engineering, Safety and Health and Engineering Mathematics. She has published as well as refereed several technical papers both at national and international levels.

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