

## **Groundwater studies in tropical islands: Malaysian perspective**

### **Abstract**

Groundwater studies related to tropical islands in Malaysia are briefly reviewed. Perspectives are addressed as three aspects: (a) study location, where groundwater studies in Malaysia are conducted in different types of tropical islands (b) methods, namely numerical modeling, geophysical investigations, hydrochemical analysis and geochemical modeling were applied in the studies of groundwater where numerical modeling is the most used method in groundwater studies of Malaysian coastal environment and tropical islands; (c) types of studies, where most of groundwater studies are more focused in investigating the groundwater resources and management as well as seawater intrusion using numerical models and geophysical investigations. This review revealed that main objectives in most of Malaysian groundwater studies in tropical islands are groundwater resources, management as well as mechanism and processes of seawater intrusion phenomenon. This showed that groundwater studies in Malaysia focusing in tropical islands are clearly needed to be increased and strategized in terms of research objectives. Based on previous studies, future studies should give a focus in other types of investigations in utilization of this resource in order to fill in the knowledge gap of groundwater to provide clear direction in sustainable development of this precious resource.