Water security issues in inhabited islands: A survey on domestic water resources management in the Sebatik Island, Sabah (Malaysia)

ABSTRAK

Malaysia is a country rich in natural water resources. The average rainfall annually is high at 2940 mm. High rainfall is essential for surface water (rivers, lakes, ponds) and groundwater supply systems in enhancing the ecological system and natural resources. However, the abundant supply of natural water resources cannot guarantee the existence of water security issues, especially in inhabited island areas such as in the Sebatik island. The definition of water security itself is the ability for each individual to access an adequate supply of clean water at an affordable price to live a productive, clean and healthy life without neglecting the wellbeing of the inhabitants and safeguard the environment. Ironically, it is unachievable if the domestic water supply management in one area is in inadequate control systems and lacks its domestic supply system. In other words, it is still inefficient, unsystematic and not holistic. This will then disrupt the stability of water supply resources in terms of quantity, quality, and accessibility. Therefore, this study aims to examine the potential sources of water supply systems in Pulau Sebatik and discuss how they are managed and controlled for domestic use. Therefore, to answer the objectives outlined, observation, evaluation and interview methods were carried out accordingly. It is found that three main sources of domestic water supply can potentially be developed and should be improved in terms of quality, quantity, and accessibility, namely groundwater, rainwater and surface water. In essence, the water security issue that exists in Pulau Sebatik is not entirely due to the lack of natural water supply resources but instead, due to unsystematic, inefficient, and incomprehensive management systems, methods, and structures.