

An Economic Analysis of Groundwater in response to climate change

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Abstract. *An overview of the socioeconomics and value of the utilisation of groundwater as well as its vulnerability to climate change, can assist in making decisions on managing groundwater in this country. Understanding and acknowledging the functions and uses of groundwater directly and indirectly to various stakeholders can facilitate the enacting and implementing of regulations and policies at the national level. The economics of groundwater utilisations for domestic and community usage in the mainland (several districts in Kelantan) and in the islands (Pulau Tioman and Pulau Mabul) and selected industries and agriculture in the states of Selangor and Kelantan were used in this study. The objective of this study to identified the cost of groundwater abstraction by both domestic and industrial use, and the valuation and cost benefit analysis (CBA) of using groundwater by selected industries, the adaptive reactions and measures adopted by local communities, industries and commercial sectors in response to climate change impacts on water supplies including upon groundwater availability, the driver, pressure, state, impact and impact (DPSIR) causal framework analysis for describing the interactions between society and groundwater resource by local communities, industries and commercial sectors and the identification of critical issues affecting national groundwater supplies, research directions on groundwater in the country and outlining potential research areas to ensure a more effective and efficient utilization of groundwater in the country.*