



Health Risk Assessment for Groundwater Resource Used for Drinking Water in Pingtung Plain, Taiwan

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Groundwater has been massively used for drinking by local residents due to deficiency in surface water in Pingtung Plain, Taiwan. A long-term survey of groundwater quality revealed that concentrations of water quality items in some of the monitoring wells exceeded the Taiwanese standards for drinking water quality. Water of poor quality can have an adverse health impact. Effective health risk-based groundwater management typically faces great challenges because of the inherent spatial variability in groundwater quality. In this study, we target to spatially analyze the health hazard and risk from consumption of groundwater for drinking. We computed the hazard quotient and health risk using exposure and risk model and hydrochemical data surveyed by Taiwan Water Resource Agency and Environmental Protection Agency. The zone suitable for groundwater used is delineated based on the results of the spatial health risk map. The results of the analysis can help government administrator in managing groundwater used for drinking in Pingtung Plain in Taiwan.