



A Customized Drought Decision Support Tool for Hsinchu Science Park

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Climate change creates more challenges for water resources management. Due to the lack of sufficient precipitation in Taiwan in fall of 2014, many cities and counties suffered from water shortage during early 2015. Many companies in Hsinchu Science Park were significantly influenced and realized that they need a decision support tool to help them managing water resources. Therefore, a customized computer program was developed, which is capable of predicting the future status of public water supply system and water storage of factories when the water rationing is announced by the government. This program presented in this study for drought decision support (DDSS) is a customized model for a semiconductor company in the Hsinchu Science Park. The DDSS is programmed in Java which is a platform-independent language. System requirements are any PC with the operating system above Windows XP and an installed Java SE Runtime Environment 7. The DDSS serves two main functions. First function is to predict the future storage of Baoshan Reservoir and Second Baoshan Reservoir, so to determine the time point of water use restriction in Hsinchu Science Park. Second function is to use the results to help the company to make decisions to trigger their response plans. The DDSS can conduct real-time scenario simulations calculating the possible storage of water tank for each factory with pre-implementation and post-implementation of those response plans. In addition, DDSS can create reports in Excel to help decision makers to compare results between different scenarios.