

Study on the Improvement of Disaster Prevention Target Rainfall for Disaster Prevention in South Korea

Youngseok, Song/ Heesup, Lee/ Yangho, Lee/ Jungho, Lee/ Moojong, Park

Increasing rainfall due to recently climate change has been causing exceeding rainfall that established disaster prevention and design frequency. The design frequency of the rivers and sewer is considered by analyzing the rainfall until recently. However, it is not possible to consider the effect of nationwide rainfall increase by analyzing only the project area in South Korea.

In South Korea, it was notified nationwide to prevent floods and heavy rainfall that is Establishment and Operation Guidelines for regional prevention capacity target against disasters (National Emergency Management Agency, 2011). Disaster prevention target rainfall was calculated for 1 hour, 2 hours, and 3 hours for the 30-year frequency. A large value was applied compared to the recently rainfall analysis result and Disaster prevention target rainfall when installing major facilities such as rivers or sewer.

In this study, in order to apply the record rainstorms that have occurred continuously since 2011, analysis of rainfall data at nationwide 69 locations was used to estimate the Disaster prevention target rainfall in Korea. It was analyzed that the existing disaster prevention target rainfall increased by 1.72% for one hour, 0.91% for two hours and 0.68% for three hours.

Acknowledgement

This research was supported by a grant 'Development of the Evaluation Technology for Complex Causes of Inundation Vulnerability and the Response Plans in Coastal Urban Areas for Adaptation to Climate Change' [MPSS-NH-2015-77] through the Disaster and Safety Management Institute funded by Ministry of Public Safety and Security of Korean government.