



A Study on the Depth Damage Function Development of Public Buildings

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As the risk of flood damage increases and the timing of occurrence becomes irregular, more effective flood risk management is required. In order to establish the optimal flood mitigation countermeasures, it is necessary to analyze the cost mitigation effectiveness for various flood mitigation measures. For this analysis, it is necessary to analyze the damage area and the depth of flooding through hydraulic and hydrological analysis, and to estimate the damage cost for the expected area. Flood damage costs are generally estimated according to the flooding depth for building structures and contents. In this study, we collected and analyzed public property value, flood depth information, detailed damage status through field survey, and added a specialist questionnaire to develop and apply the damage function for flood depth to public buildings. In order to verify the damage function for public buildings, we compared the actual damage data with the results of HAZUS-MH in the United States, MCM in England, and the existing model developed in Korea. The comparison with the models showed that applying the function of this study best reflects actual damage amount in Korea.

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