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Efficiency of Urban Drainage Networks: A Case Study in Seoul

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The efficiency of urban drainage networks are very important within the framework of flood mitigation planning. This study suggests a methodology to evaluate the efficiency of urban drainage networks. Gibbs's model was applied to 237 catchments in Seoul. If the parameter β is less than 10^0, it is regards as an inefficient network. Otherwise, it is an efficient network. The results show number of catchments with lower β is greater than with higher β. This is contradictory to common sense that urban drainage networks are efficient. Identifying the efficiency of an urban drainage networks suggest potential flood reduction by an alternative method, which is related to a layout of the networks.