

Development of the KTTI(Korean Typhoon Type Index) by Analyze the Characteristics of Typhoon Affecting the Korean Peninsula

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Recently, climate change has been strengthening the power of typhoons affecting the Korean Peninsula and increasing the resulting damage. According to the Ministry of the Interior and Safety's 'Statistical yearbook of natural disaster (2018)', out of all 361 typhoons that affected the Korean Peninsula from 1904 to 2018, 6 typhoons since 2000 have been recorded as the top 10 in property damage rankings. Therefore, this study has aimed to analyze the characteristics of typhoons affecting the Korean Peninsula and objectively quantify the extent of the effects of rain and wind on each typhoon. Typhoon represents the complex characteristics of rain and wind, and to analyze it objectively, it is necessary to quantify the degree of influence of rain and wind of each typhoon. The TTI is an index that quantifies the relationship between cumulative precipitation and strong winds within the impact period for all typhoons passing through one observation point. If the index calculated like this is positive, it can be classified as a wind typhoon that is heavily affected by the wind, or a rain typhoon that is heavily affected by rain if it is negative. And the closer the index is to 0, the more evenly influenced by rain and wind. As a result of analyzing the impact of typhoon on the Korean peninsula by applying the typhoon impact index to the Korean peninsula, the degree of impact of rain and wind on each typhoon could be expressed as an objective number. This study is a basic study to develop the Korean Typhoon Type Index (KTTI) for understand the characteristics of rain and wind.

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