Improvement of Prediction Accuracy of 3-second gust caused by Typhoon –Meteorological Input Data : GDAPS, RDAPS, GFS -

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The damage caused by recent typhoons affecting the Korean Peninsula has been increasing rapidly. The top 10 records of maximum instantaneous wind speed caused by typhoons has shown by typhoons since the 2000s. Compared to the past, the frequency of typhoons is decreasing and the intensity of typhoons is getting stronger. In order to reduce damage from typhoons, a Typhoon Pre-prevention Disaster Model developed and operated to predict 3-second gust(maximum instantaneous wind speed) caused by typhoons and to calculate the possible damage. In order to improve the accuracy of Typhoon Pre-prevention Disaster Model, meteorological input data such as GDAPS(Global Data Assimilation Prediction System), RDAPS(Regional Data Assimilation System), and GFS(Global Forecast System) were applied to the Model. 3-second gust calculated using GDAPS as the meteorological input data showed the most similar results to the observed values for the RMSE, MB, and IOA values used as statistical indicators, followed by RDAPS and GFS.

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Keywords: Typhoon Pre-prevention Disaster Model, 3-second gust, GDAPS, RDAPS, GFS

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