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## Assessment of heavy rainfall risk of typhoon Hagibis (2019) associated with typhoon track

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Typhoon Hagibis (2019) caused heavy rainfall and big flood damage in many river basins in Japan. In this research, we suggested the risk assessment method for heavy rainfall due to typhoon from the view point of a typhoon track by using records of rain gauges and typhoon track data from 1951. The relationships between typhoon position and rainfall intensity were obtained from the rain gauges and the typhoon track data for each rain gauge points. The relationships make it clear that typhoon track passes through the areas in which heavy rainfall occurred. The relationship can be used for risk assessment of heavy rainfall in terms of typhoon track. The track of Typhoon Hagibis is the heaviest rainfall track for some points located in north of the typhoon track. However, some points close to the typhoon center or in south of the typhoon track are not the heaviest rainfall track. It means that if typhoon Hagibis shifted the track, the typhoon would cause heavier rainfall in some points. The result can be used not only for estimation of potential rainfall but also for selection of dangerous typhoons from large ensemble dataset. We assessed heavy rainfall risk of typhoons similar to typhoon Hagibis under historical and future climate by using the large ensemble climate dataset (d4PDF).