

Recovery of tropical cyclone activity in the western north Pacific in 1950

*Hisayuki Kubota¹

1. The University of Tokyo

Tropical cyclone (TC) activity is influenced by the background atmosphere and ocean conditions; El Niño Southern Oscillation (ENSO), Madden-Julian Oscillation (MJO), Pacific-Japan pattern etc. Those have impacts to modulate the genesis numbers and locations, tracks and intensities of the TCs. In 2016, monsoon gyre was formed in the south of Japan in August. Seven TCs were generated in and around the monsoon gyre and four of them were landed mainland Japan.

Historical TC track data have been collected from various bulletins stored in US, Japan, Philippines, China and other countries back to late 19th century through the “data rescue” activity. The TC landfall numbers in mainland Japan were analyzed using historical TC track data and station data from 1900. TC is defined when it was generated south of Japan and measured less than 1000hPa near the cyclone. Landfall is defined when the minimum sea level pressure measured less than 1000 hPa near the landfall point and the right/left side station measured clockwise/anticlockwise wind direction change during the passage in Japan.

In 1950, ten TCs were landed Japan which was the maximum annual landfall numbers from 1900. Among ten, six of the TCs were landed in August. In this study, the background atmospheric condition and TC activities in August 1950 are recovered and discussed using the historical documents and data. Monsoon gyre was formed in the south of Japan in August 1950. Numbers of small TCs were formed in and around the monsoon gyre. On the other hand, the predecessor of Joint Typhoon Warning Center detected two TCs in August.

Keywords: tropical cyclone, data rescue, monsoon gyre