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Future PMPs Estimation in Korea under AR5 RCP 8.5 Climate Change Scenario: Focus on Dew Point Temperature Change

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According to future climate change scenarios, future temperature is expected to increase gradually. Therefore, it is necessary to reflect the effects of these climate changes to predict Probable Maximum Precipitations (PMPs). In this presentation, PMPs will be estimated with future dew point temperature change. After selecting 174 major storm events from 1981 to 2005, new PMPs will be proposed with respect to storm areas (25, 100, 225, 400, 900, 2,025, 4,900, 10,000 and 19,600 km2) and storm durations (1, 2, 4, 6, 8, 12, 18, 24, 48 and 72 hours) using the Korea hydro-meteorological method. Also, orographic transposition factor will be applied in place of the conventional terrain impact factor which has been used in previous Korean PMPs estimation reports. After estimating dew point temperature using future temperature and representative humidity information under the Korea Meteorological Administration AR5 RCP 8.5, changes in the PMPs under dew point temperature change will be investigated by comparison with present and future PMPs.

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