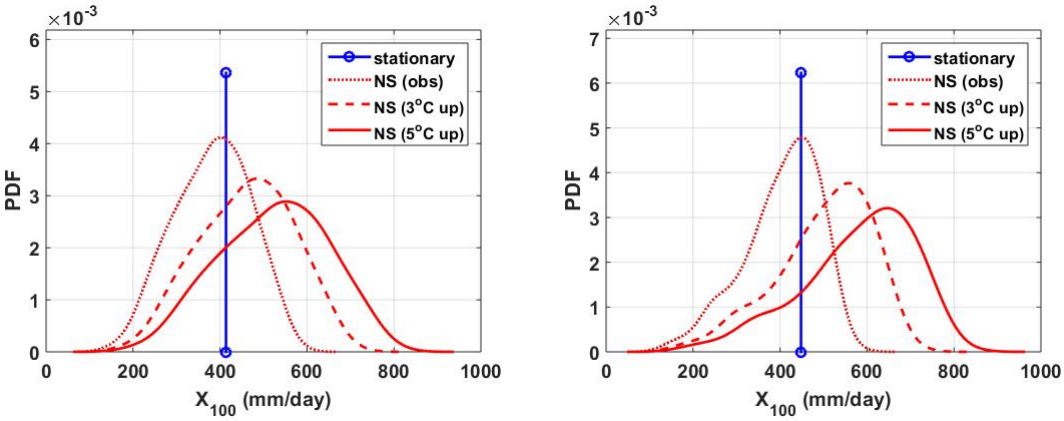
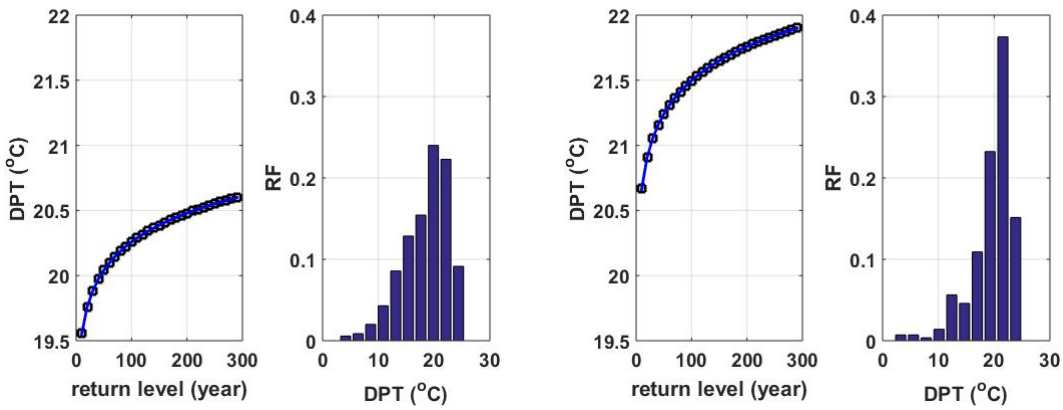
Revised Figure: Figure 5



(a) (b)

Figure 5. Rainfall quantile estimates at (a) Busan, and (b) Seoul sites for return level of 100-year using observed dew-point temperature and global warming scenarios. The stationary rainfall quantile is indicated as a blue vertical line since it is a single value. The non-stationary rainfall quantiles were calculated using the average of the parameter ensemble sampled by MCMC and the DPT observed on the day of POT excesses (red dotted line). In this figures, 'NS (3 ℃ up)' is an empirical distribution of rainfall quantile derived using DPTs that add 3 ℃ to DPTs observed on the day of POT excesses. Likewise, 'NS (5 ℃ up)' is an empirical distribution of rainfall quantile under the scenario condition where DPT has risen 5 ℃ due to global warming.

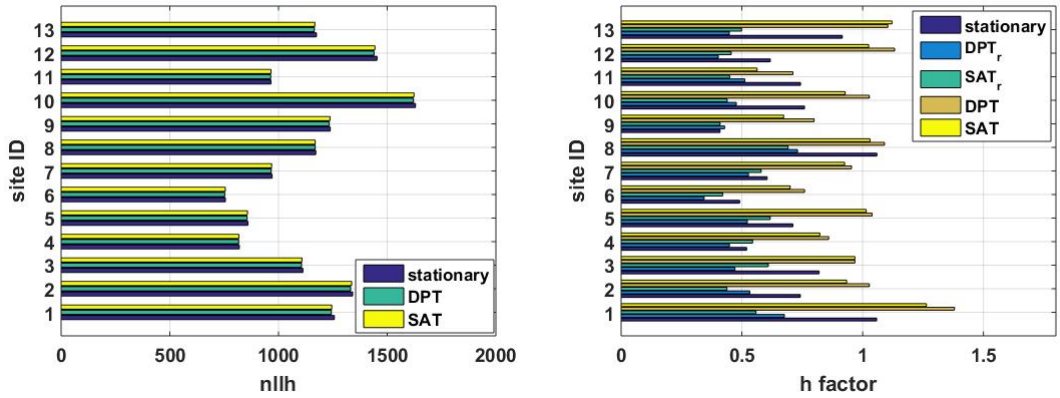
Revised Figure: Figure 6



(a) Busan (b) Seoul

Figure 6. Selection of reference dew-point temperature for estimating rainfall quantiles at (a) Busan and (b) Seoul sites. In this figure, 'RF' refers to the empirical relative frequency of DPT on the day of POT excess.

New Figure: Figure 7



(a) negative log likelihood (b) h factor

Figure 7. Performance of stationary and non-stationary frequency analysis models. At Site ID, 1: Ghangreung, 2: Seoul, 3: Incheon, 4: Chupungryeong, 5: Pohang, 6: Daegu, 7: Jeonju, 8: Ulsan, 9: Ghwangju, 10: Busan, 11: Mokpo, 12: Yeosu and 13: Jeju site.