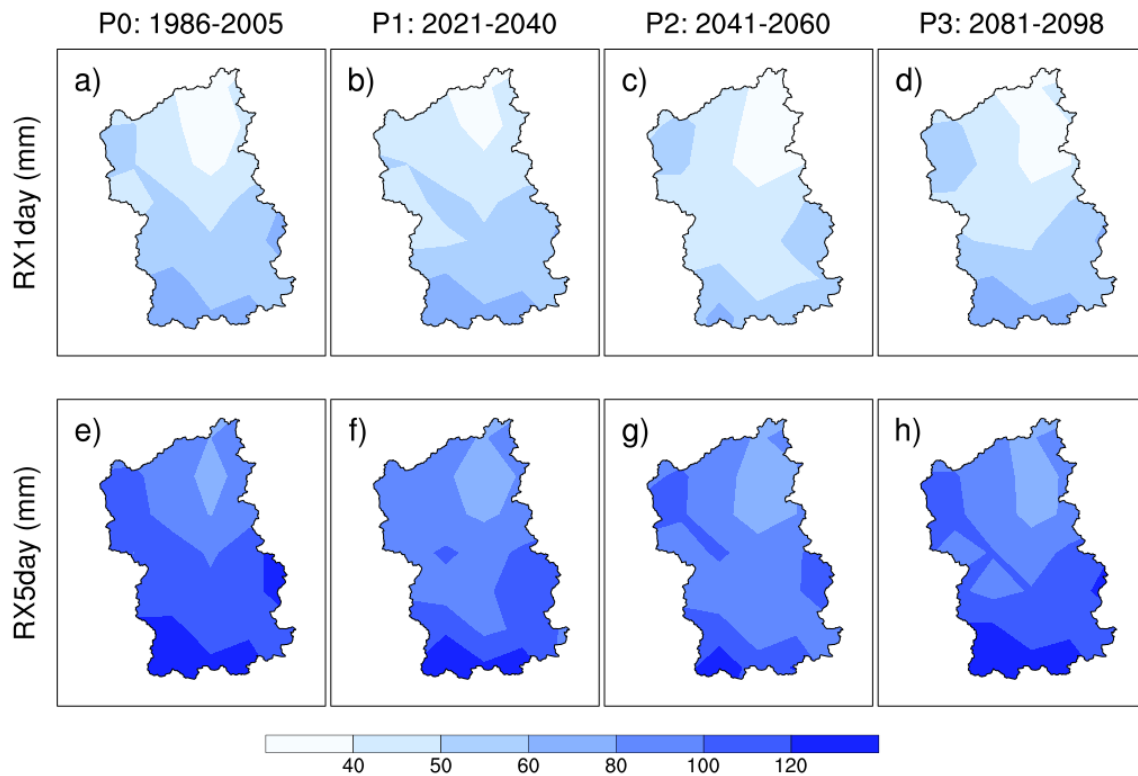
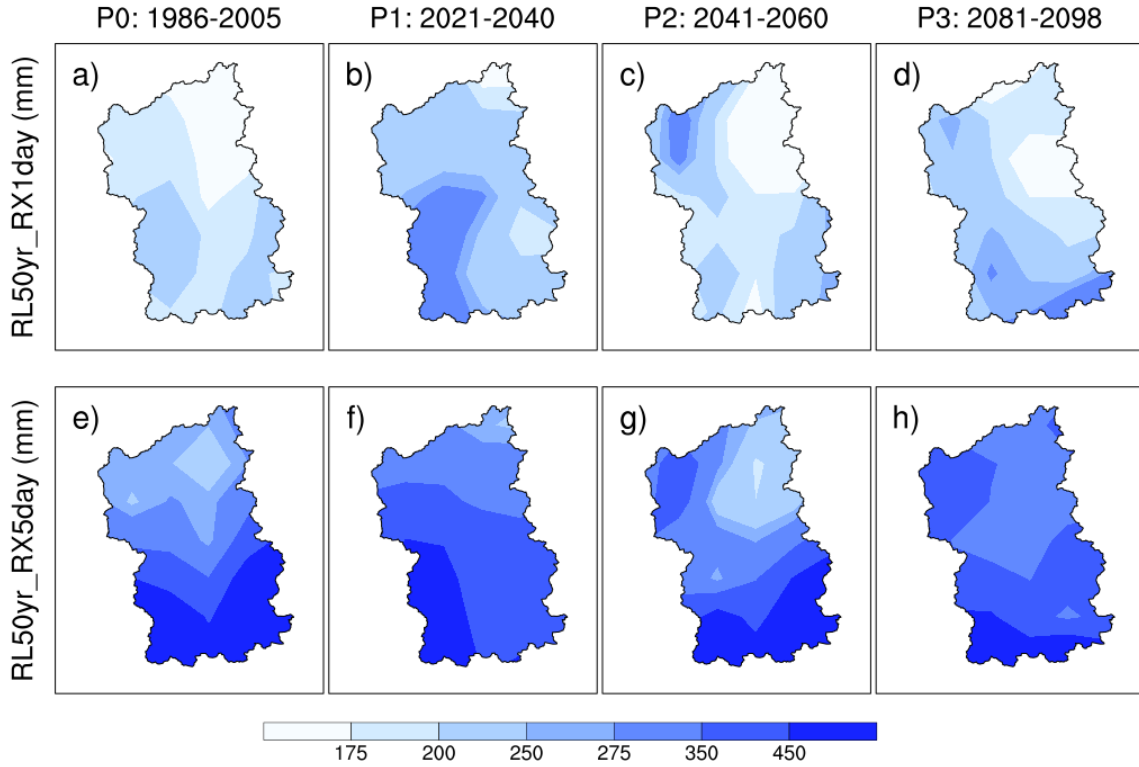


## Supplementary Material

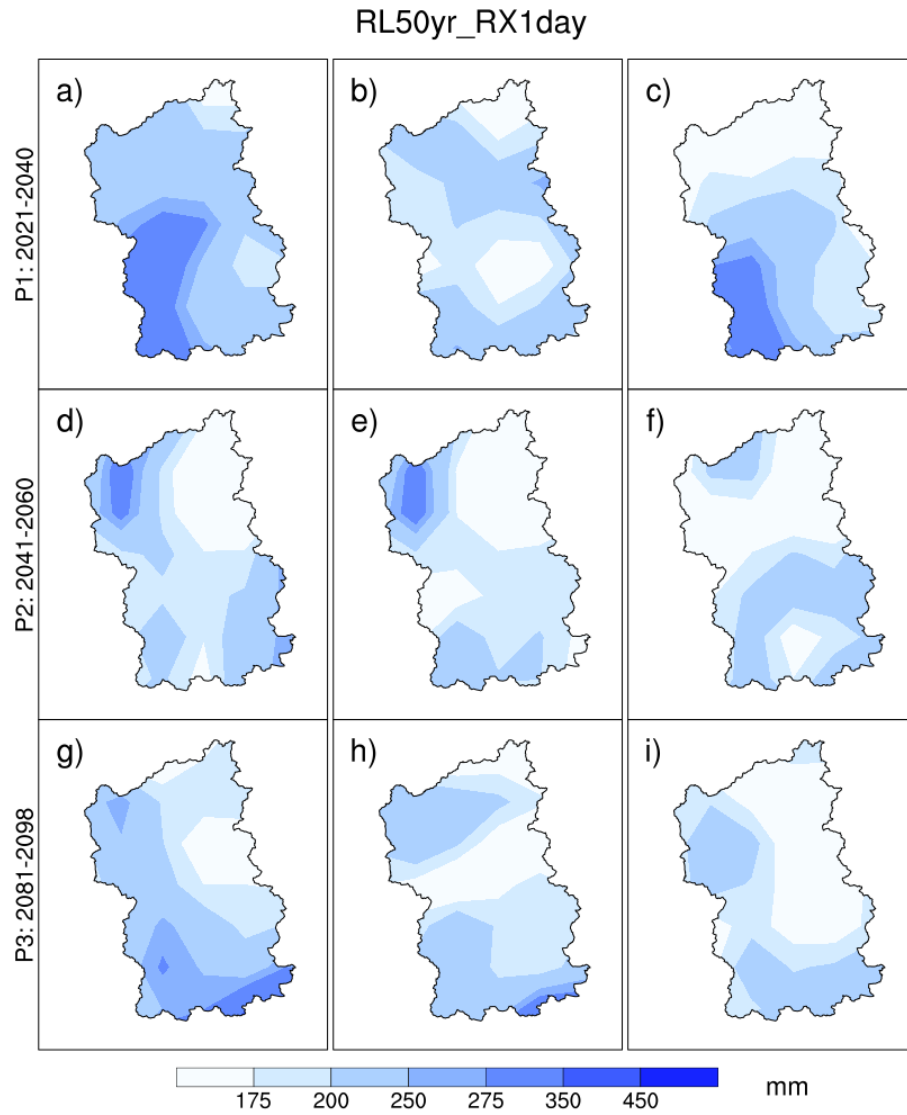
### 1 Supplementary Figures



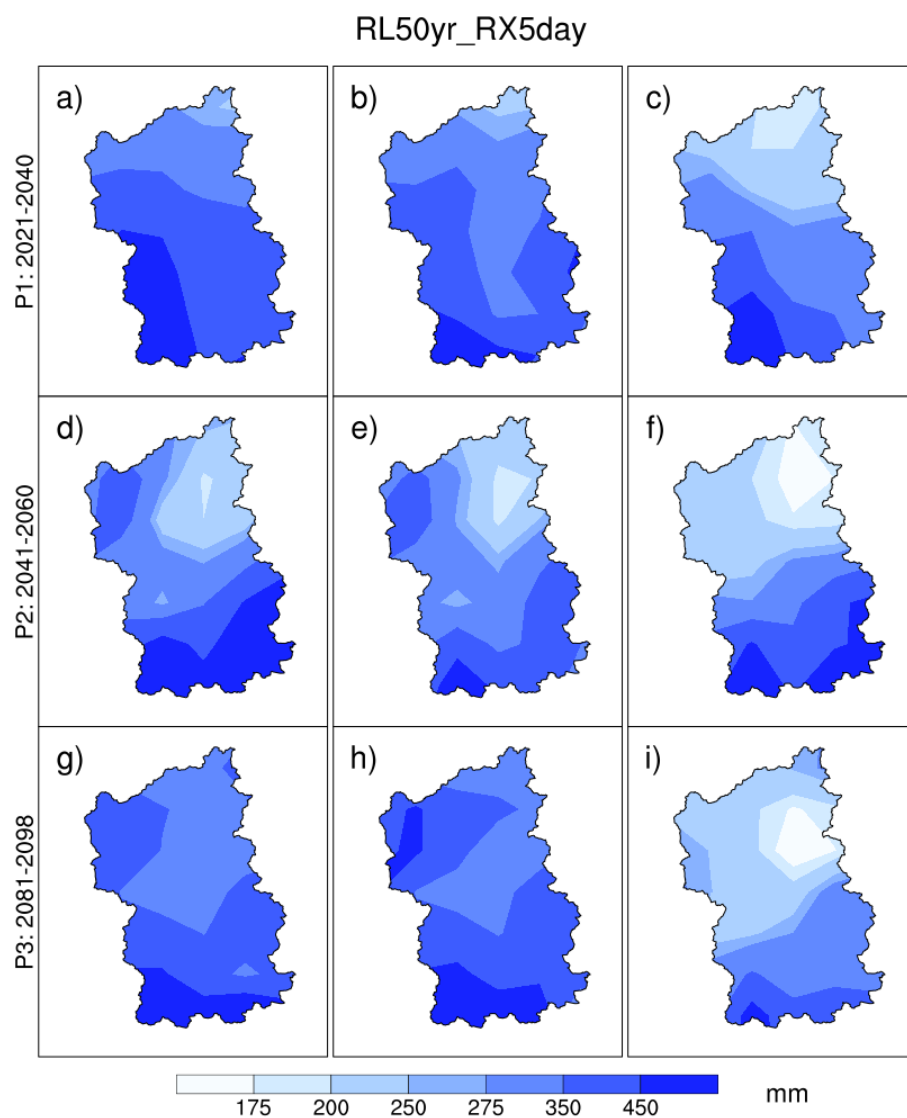
**Supplementary Figure 1.** Spatial distribution of mean RX1day for the entire rainy season estimated from RegCM4 outputs driven by HadGEM2-ES during the (a) present-day P0 (1986-2005), (b) near-future P1 (2021-2040), (c) mid-future P2 (2041-2060), and (d) far-future P3 (2081-2098) over the Jiulongjiang river basin. (e-f) are same as (a-d), but for RX5day.



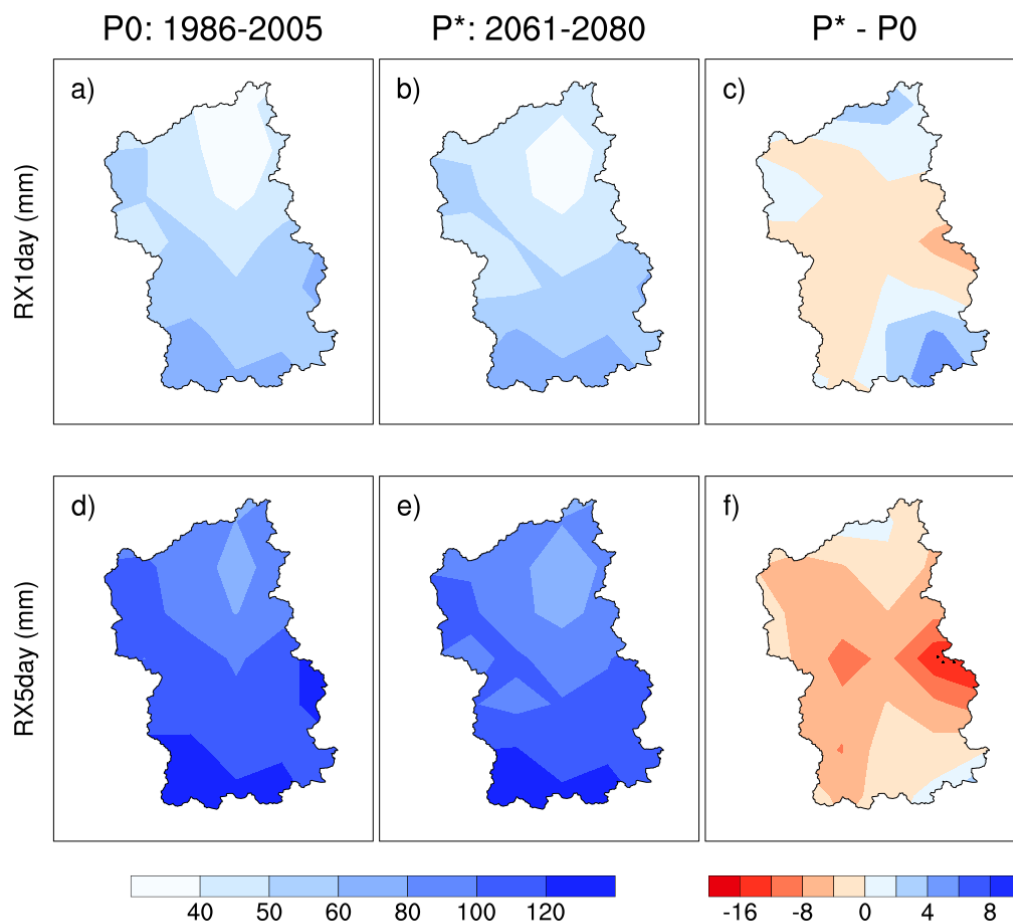
**Supplementary Figure 2.** Spatial distribution of 50-year return levels (mm) of RX1day for the entire rainy season during the (a) present-day P0 (1986-2005), (b) near-future P1 (2021-2040), (c) mid-future P2 (2041-2060), and (d) far-future P3 (2081-2098) over the Jiulongjiang river basin. (e-f) are the same as (a-d), but for 50-year return levels of RX5day.



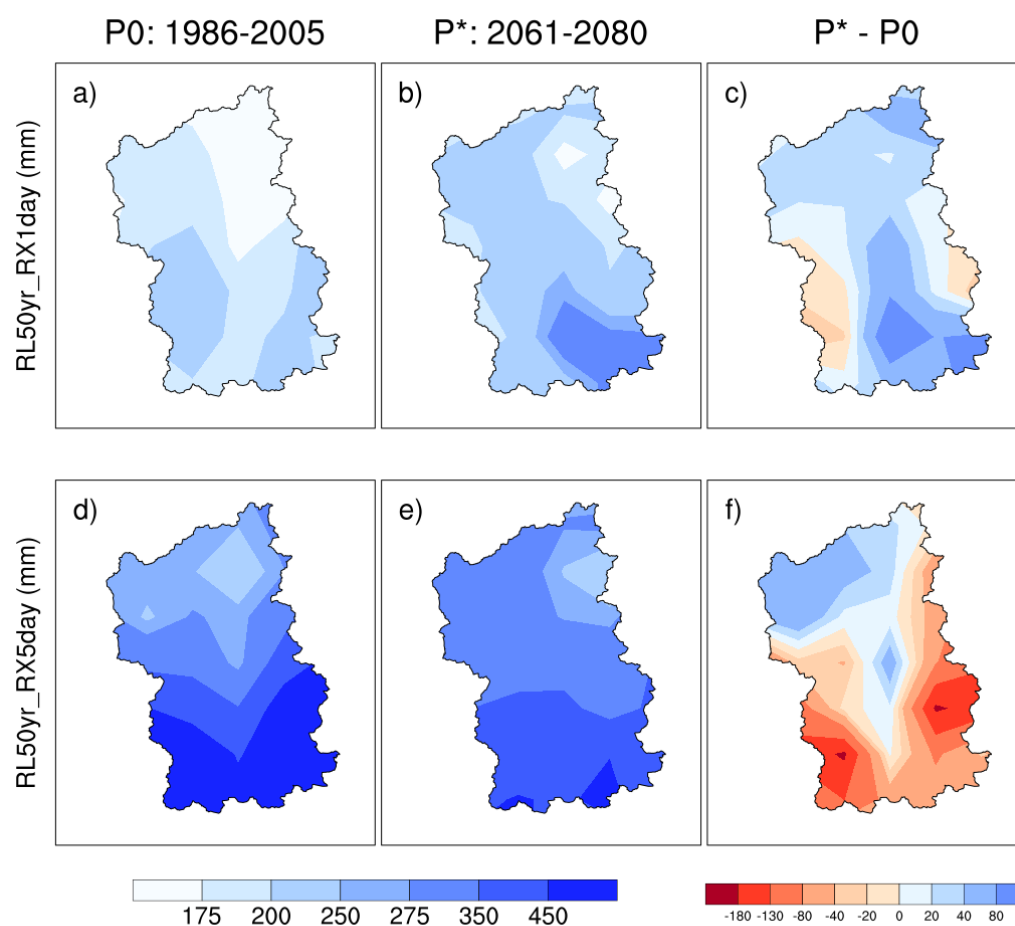
**Supplementary Figure 3.** Spatial distribution of projected 50-year return levels (mm) of RX1day for (a) the entire rainy season, (b) the first rainy season, and (c) the second rainy season during the near-future P1 (2021-2040). (d-f) and (g-i) are the same as (a-c), but for the mid-future P2 (2041-2060) and far-future P3 (2081-2098) respectively.



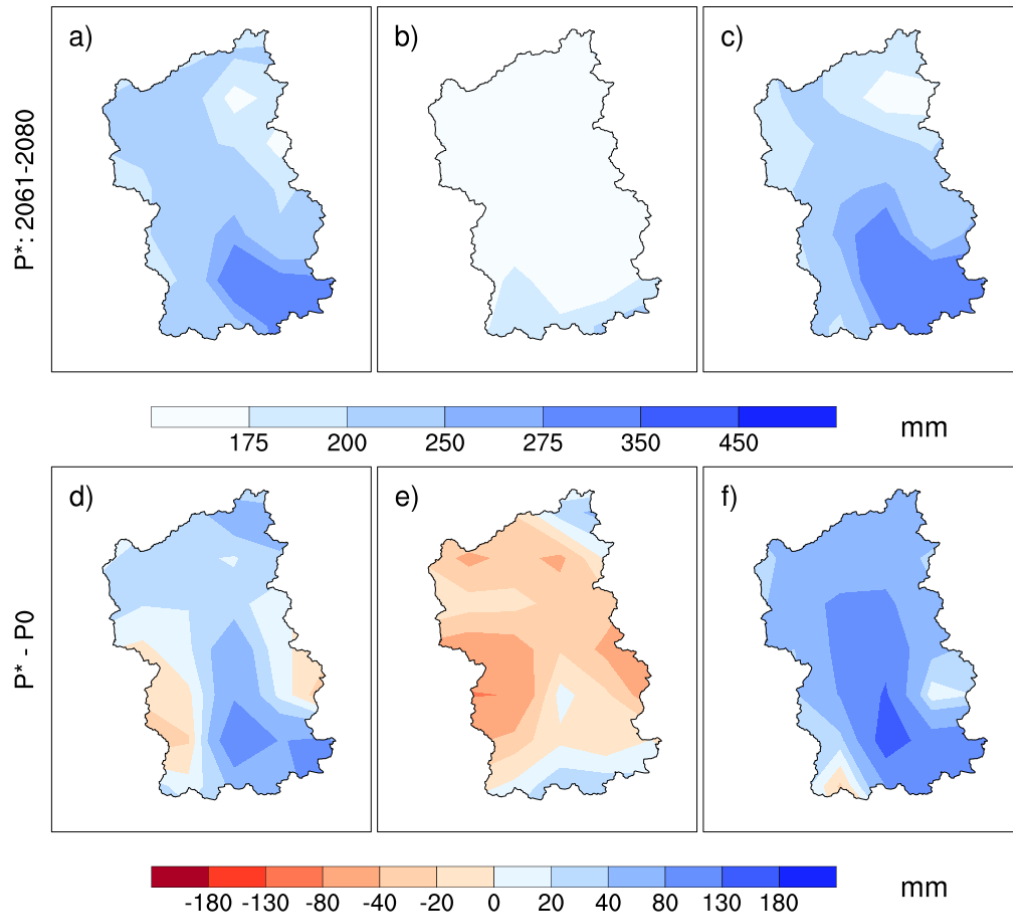
**Supplementary Figure 4.** As in Supplementary Figure 3, but for 50-year return levels of RX5day.



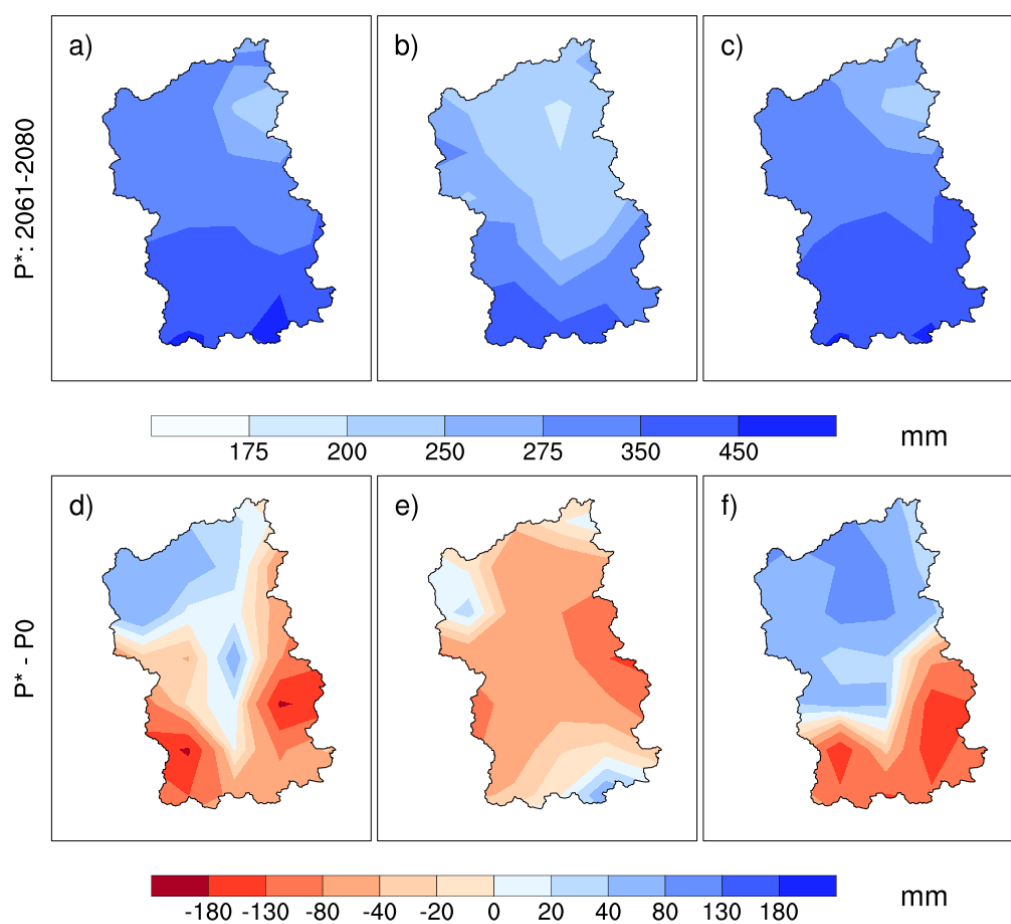
**Supplementary Figure 5.** Spatial distribution of mean RX1day (mm) for the entire rainy season during (a) P0 (1986-2005), (b) P\* (2061-2080), and (c) the projected changes in RX1day during P\* (2061-2080) relative to P0 (1986-2005). (d-f) are the same as (a-c), but for RX5day.



**Supplementary Figure 6.** Spatial distribution of 50-year return levels (mm) of RX1day in the entire rainy season during (a) P0 (1986-2005), (b) P\* (2061-2080), and (c) the projected changes in 50-year return levels (mm) of RX1day during P\* (2061-2080) relative to P0 (1986-2005). (d-f) are the same as (a-c), but for 50-year return levels of RX5day.



**Supplementary Figure 7.** Spatial distribution of the projected 50-year return levels (mm) of RX1day under the RCP4.5 for the (a) entire rainy season, (b) the first rainy season, and (c) the second rainy season during P\* (2061-2080). (d-f) are the same as (a-c), but for the projected changes in 50-year return levels (mm) of RX1day during P\* (2061-2080) relative to P0 (1986-2005).



**Supplementary Figure 8.** As in Supplementary Figure 7, but for 50-year return levels of RX5day.