HighResClimNevada: a High-resolution Climatological Dataset for a High-altitude Region in Southern Spain (Sierra Nevada)

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Supplementary figures
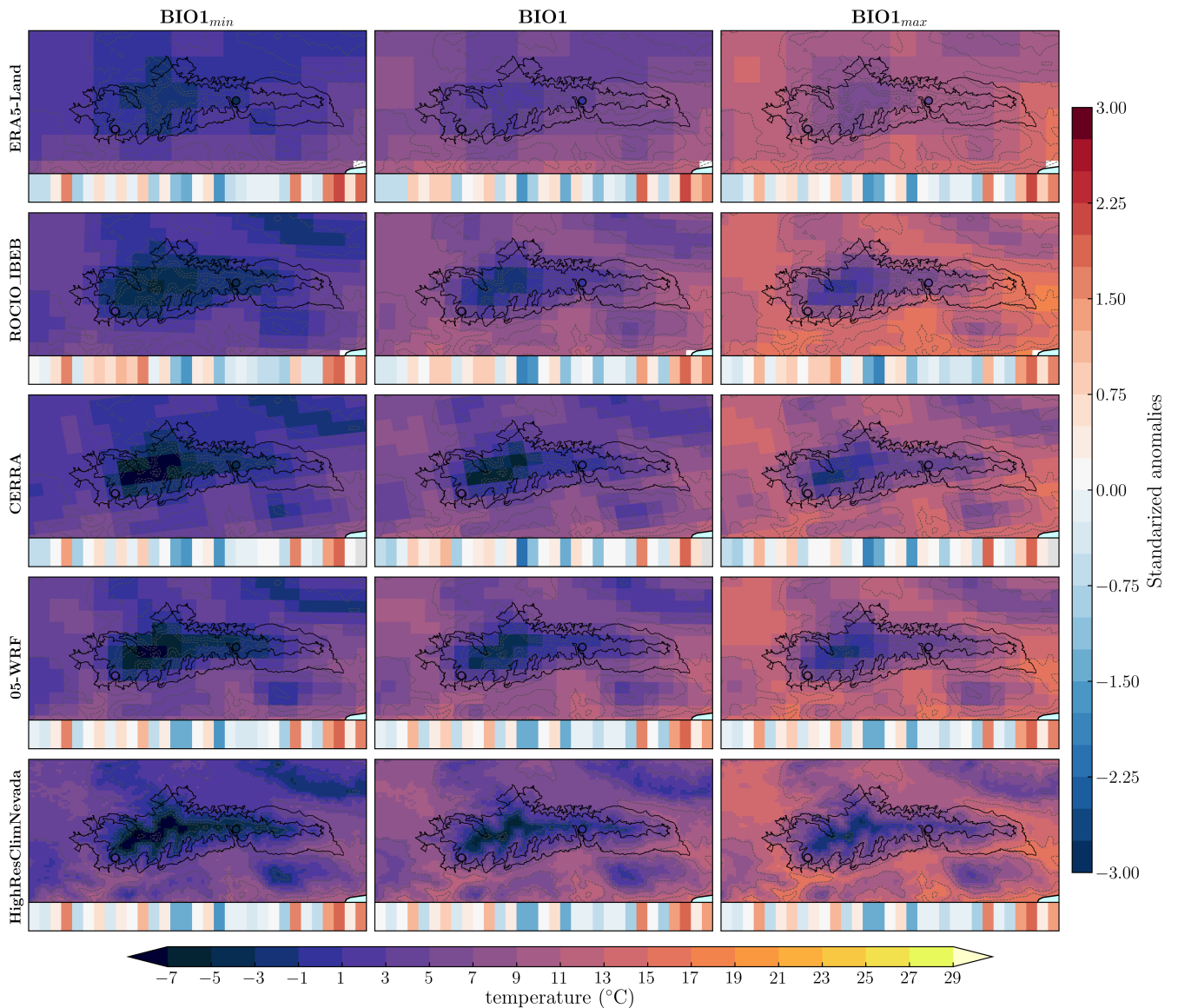
Fig. S1 Winter (DJF) average of daily maximum (tasmax), mean (tasmean), and minimum (tasmin) temperatures (°C). Below each panel, the annual temperature in Sierra Nevada is shown through *warming stripes* related to 2001-2020.
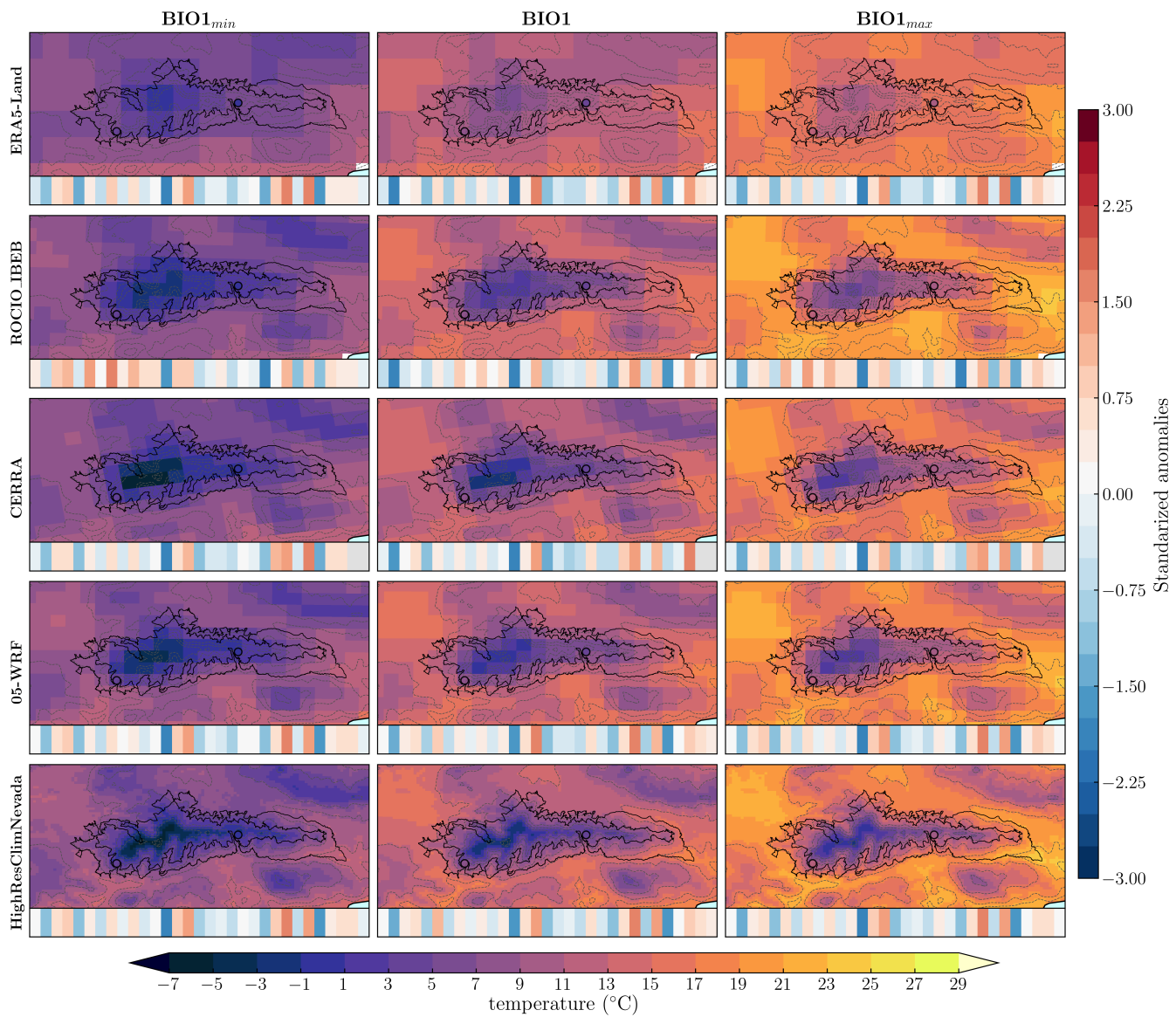
Fig. S2 Spring (MAM) average of daily maximum (tasmax), mean (tasmean), and minimum (tasmin) temperatures (°C). Below each panel, the annual temperature in Sierra Nevada is shown through *warming stripes* related to 2001-2020.
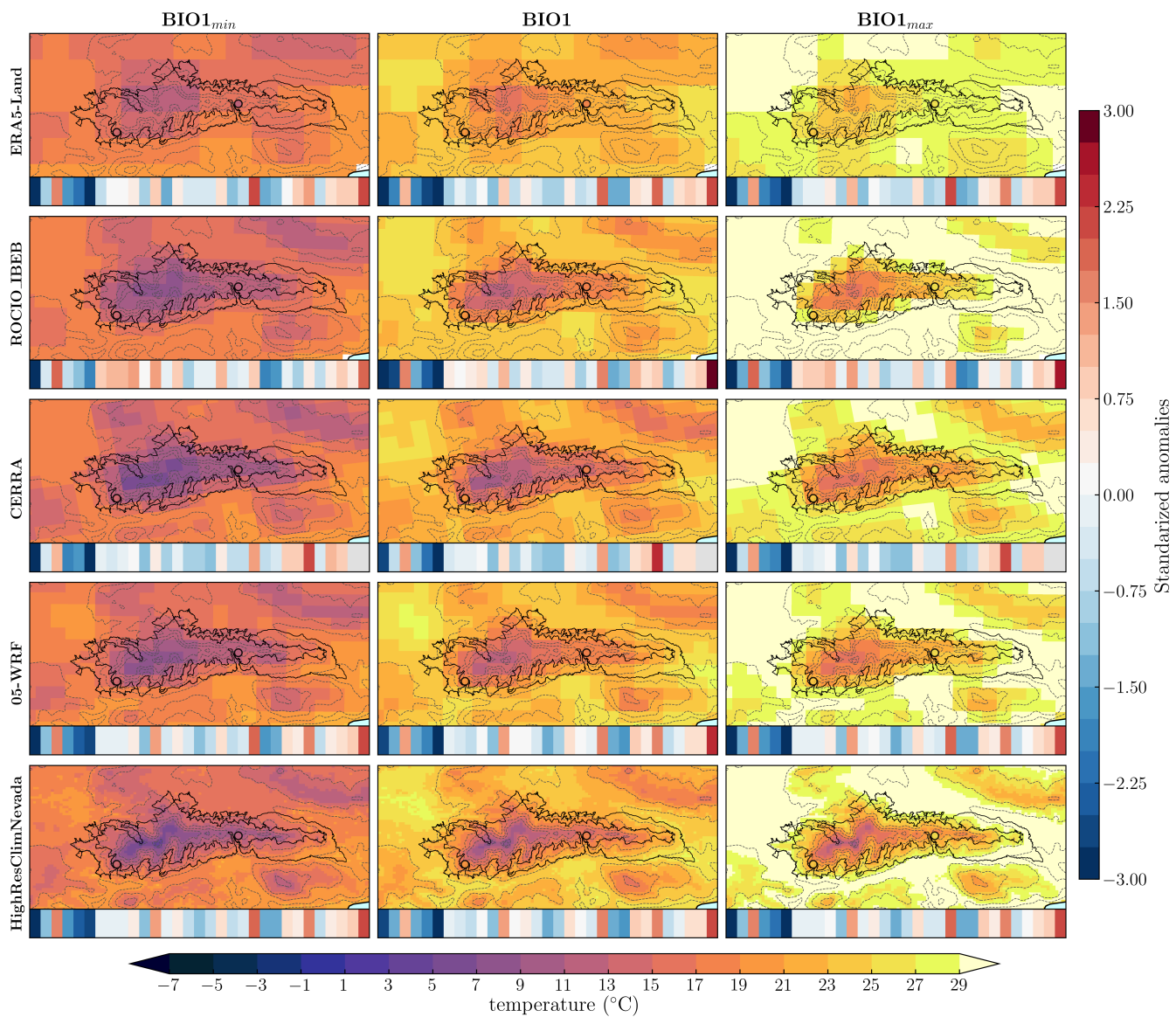
Fig. S3 Summer (JJA) average of daily maximum (tasmax), mean (tasmean), and minimum (tasmin) temperatures (°C). Below each panel, the annual temperature in Sierra Nevada is shown through *warming stripes* related to 2001-2020.
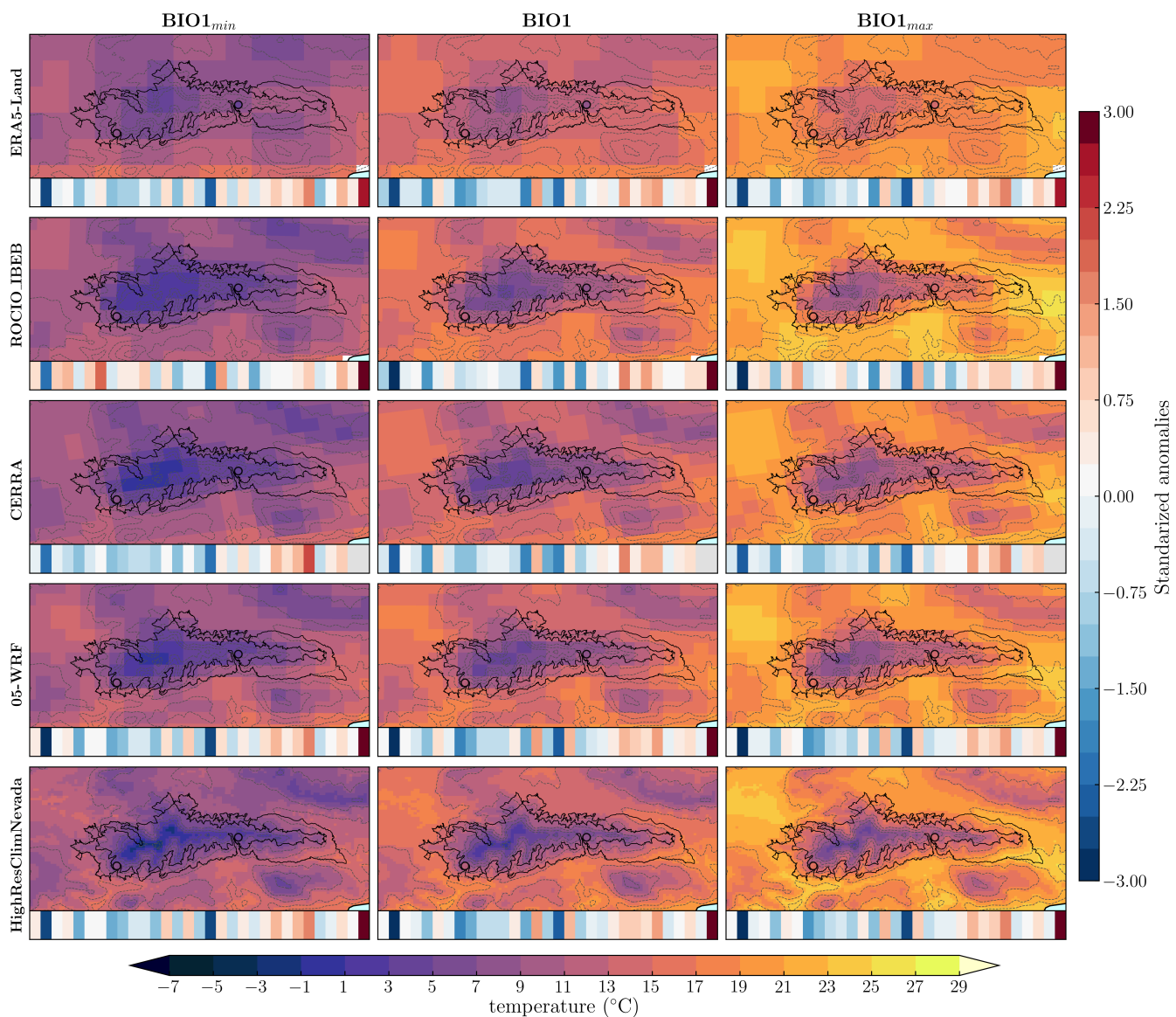
Fig. S4 Autumn (SON) average of daily maximum (tasmax), mean (tasmean), and minimum (tasmin) temperatures (°C). Below each panel, the annual temperature in Sierra Nevada is shown through *warming stripes* related to 2001-2020.
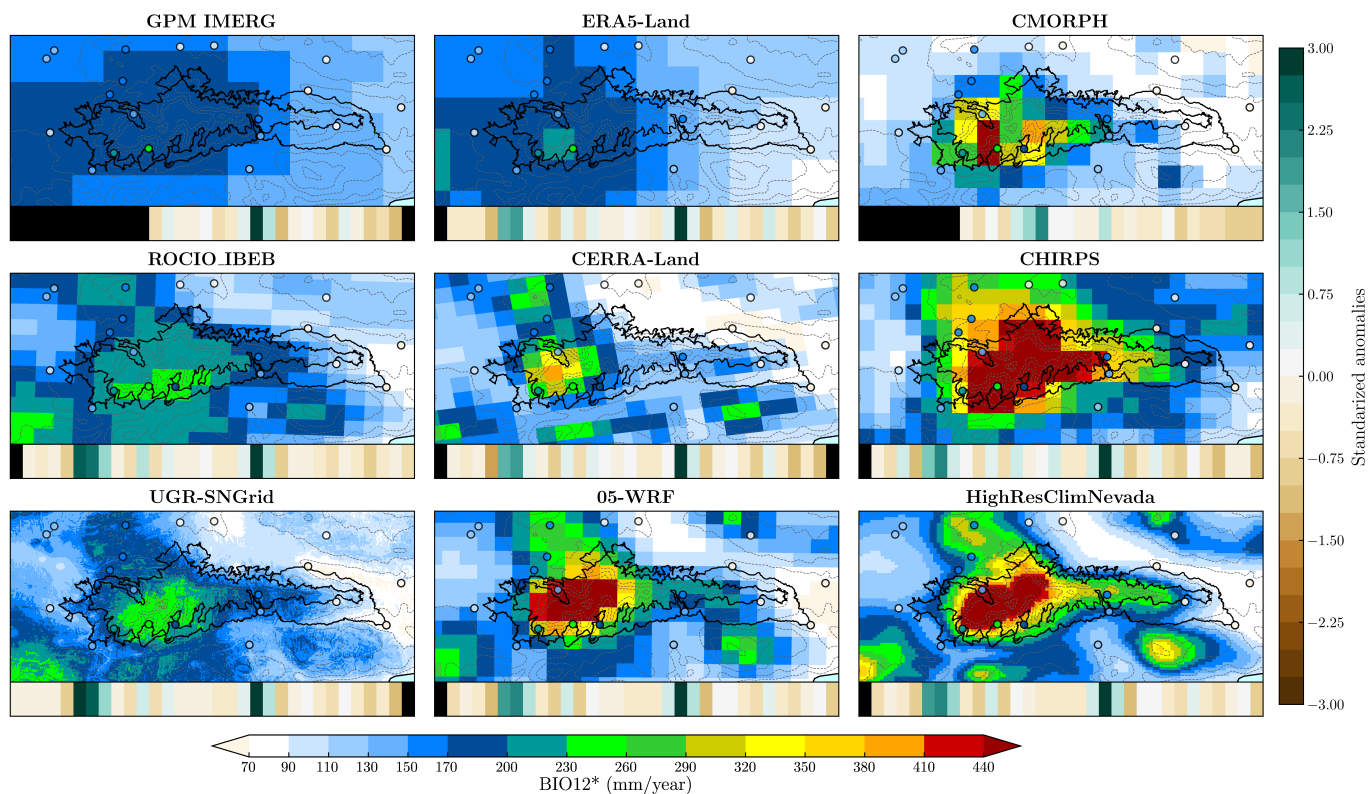
Fig. S5 Winter (DJF) amount of precipitation (mm) in Sierra Nevada. Below each panel, the annual precipitation in Sierra Nevada is shown through *drying stripes* related to 2001-2020.
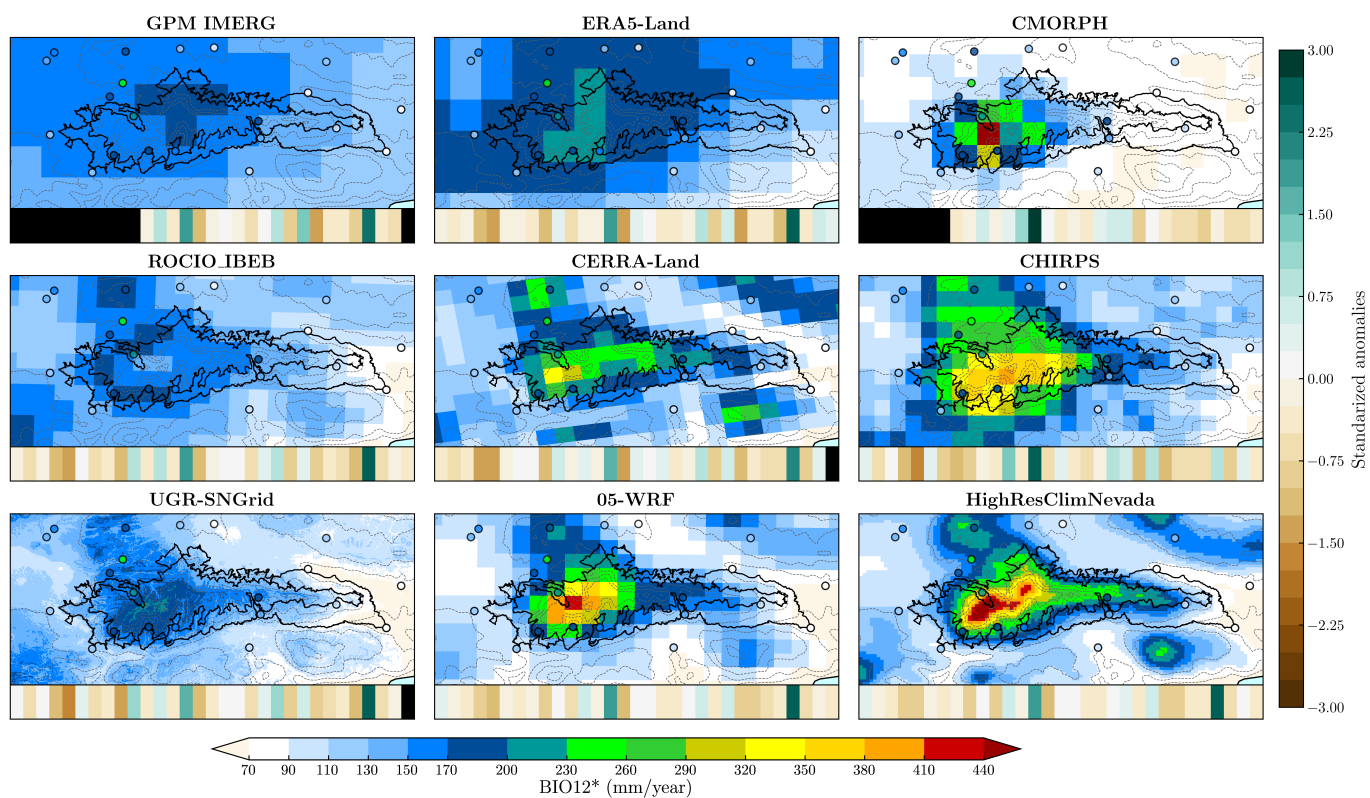
Fig. S6 Spring (MAM) amount of precipitation (mm) in Sierra Nevada. Below each panel, the annual precipitation in Sierra Nevada is shown through *drying stripes* related to 2001-2020.
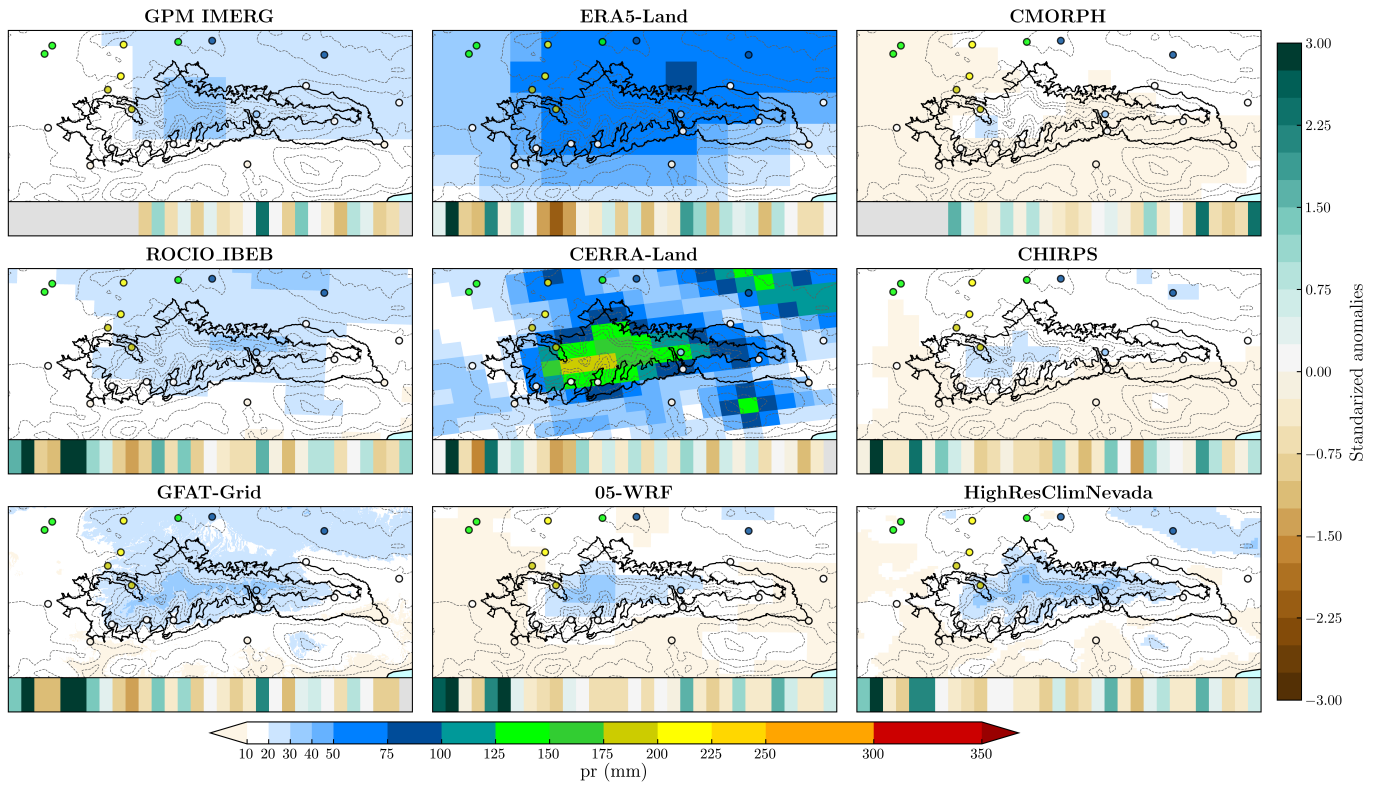
Fig. S7 Summer (JJA) amount of precipitation (mm) in Sierra Nevada. Below each panel, the annual precipitation in Sierra Nevada is shown through *drying stripes* related to 2001-2020.
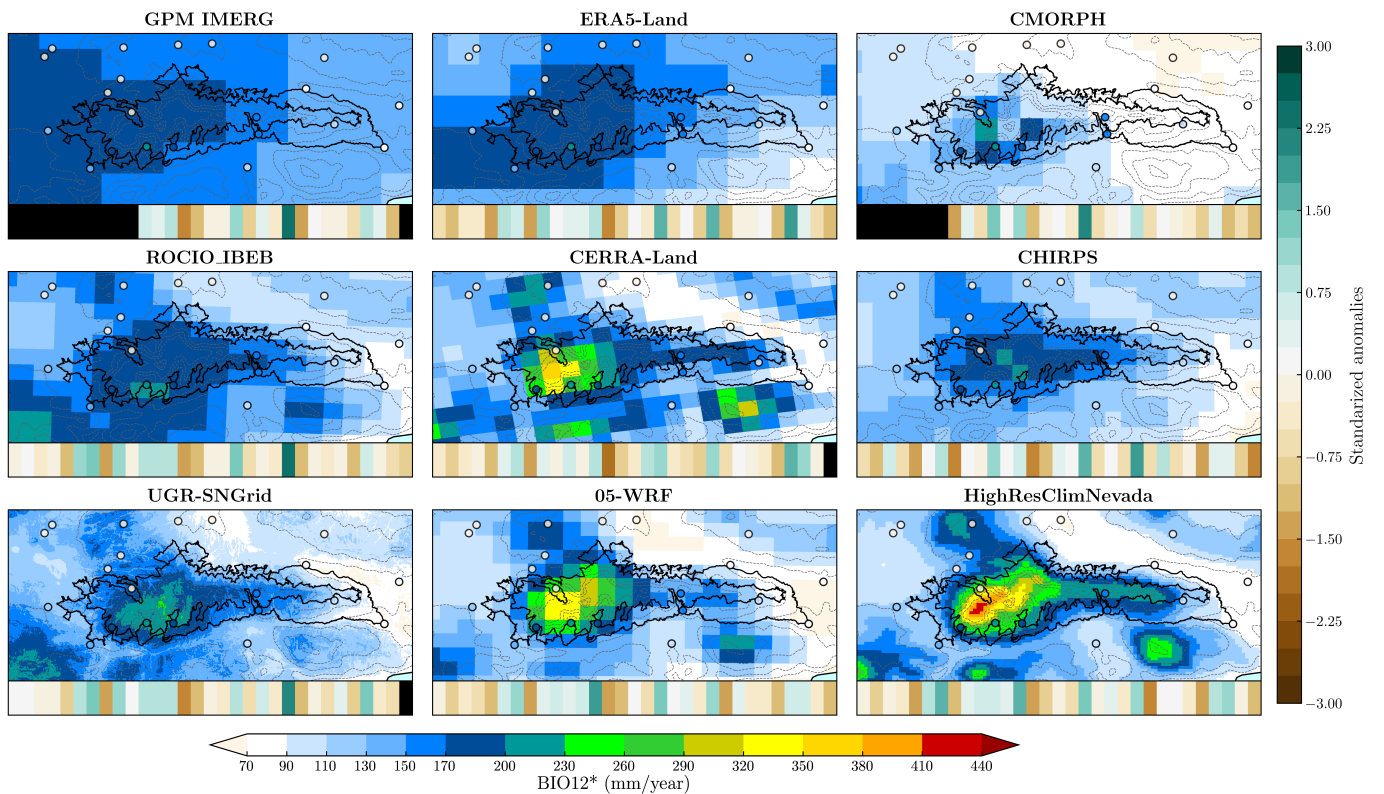
Fig. S8 Autumn (SON) amount of precipitation (mm) in Sierra Nevada. Below each panel, the annual precipitation in Sierra Nevada is shown through *drying stripes* related to 2001-2020.
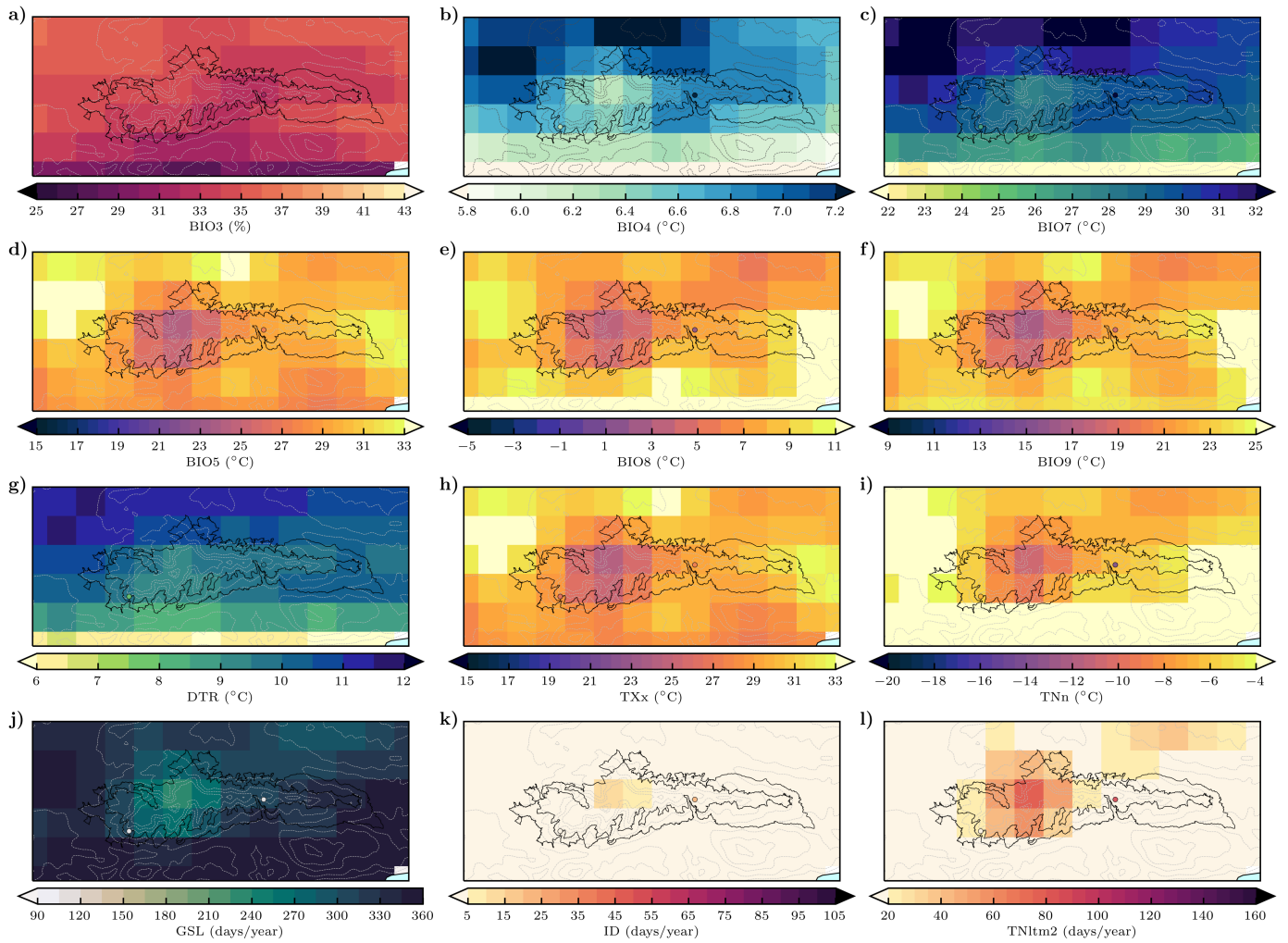
Fig. S9 ERA5-Land temperature bioclimatic variables and extremes: (a) isothermality (BIO3, %), (b) temperature seasonality (BIO4, °C), (c) annual temperature range (BIO7, °C), (d) daily temperature range (DTR, °C), (e) maximum TX (TXx, °C), (f) minimum TN (TNn, °C), (g) growing season length (GSL, days/year), (h) frost days* (FD, TNltm2), and (j) icing days (ID, days/year).
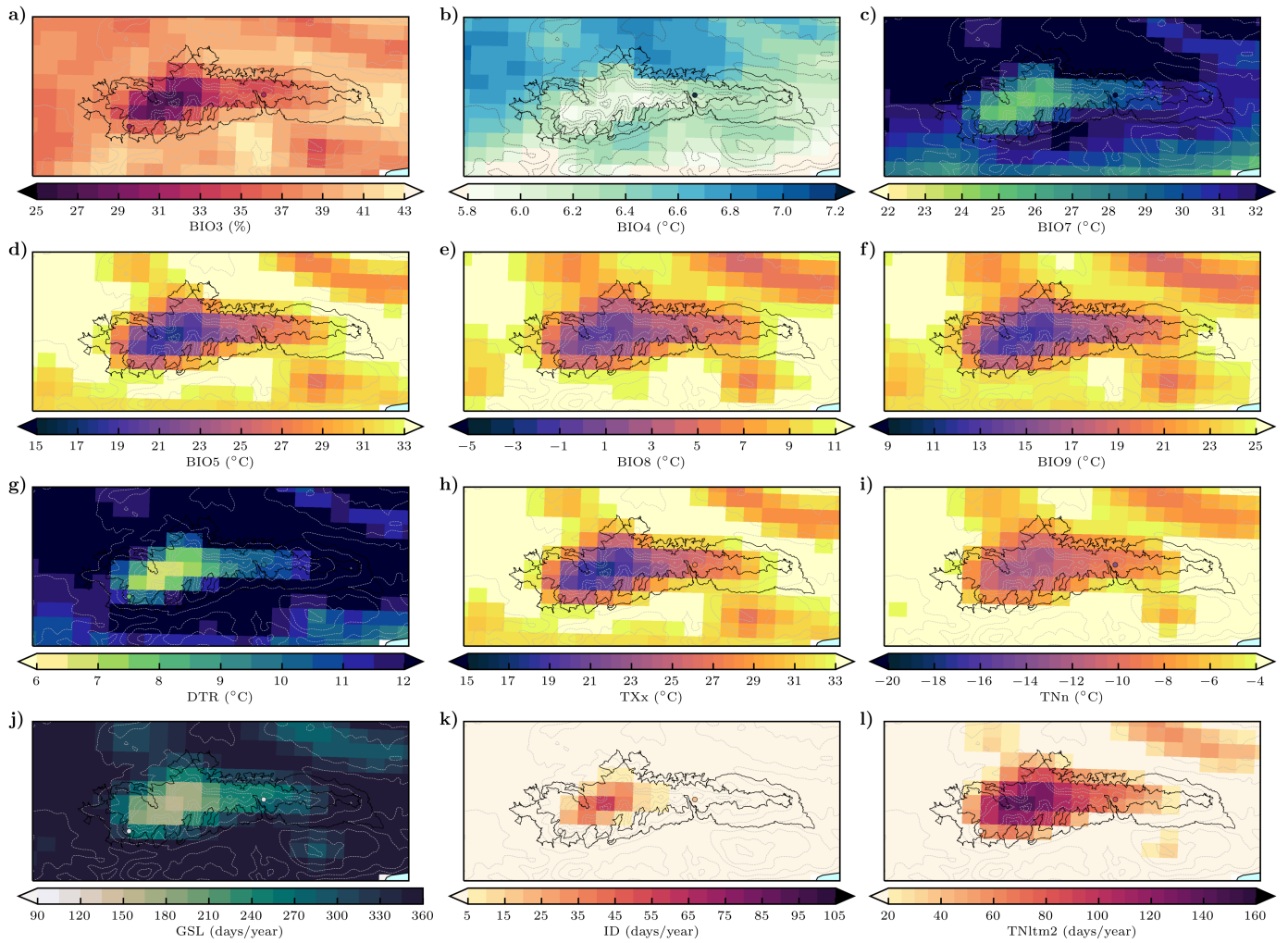
Fig. S10 ROCIO_IBEB temperature bioclimatic variables and extremes: (a) isothermality (BIO3, %), (b) temperature seasonality (BIO4, °C), (c) annual temperature range (BIO7, °C), (d) daily temperature range (DTR, °C), (e) maximum TX (TXx, °C), (f) minimum TN (TNn, °C), (g) growing season length (GSL, days/year), (h) frost days* (FD, TNltm2), and (j) icing days (ID, days/year).
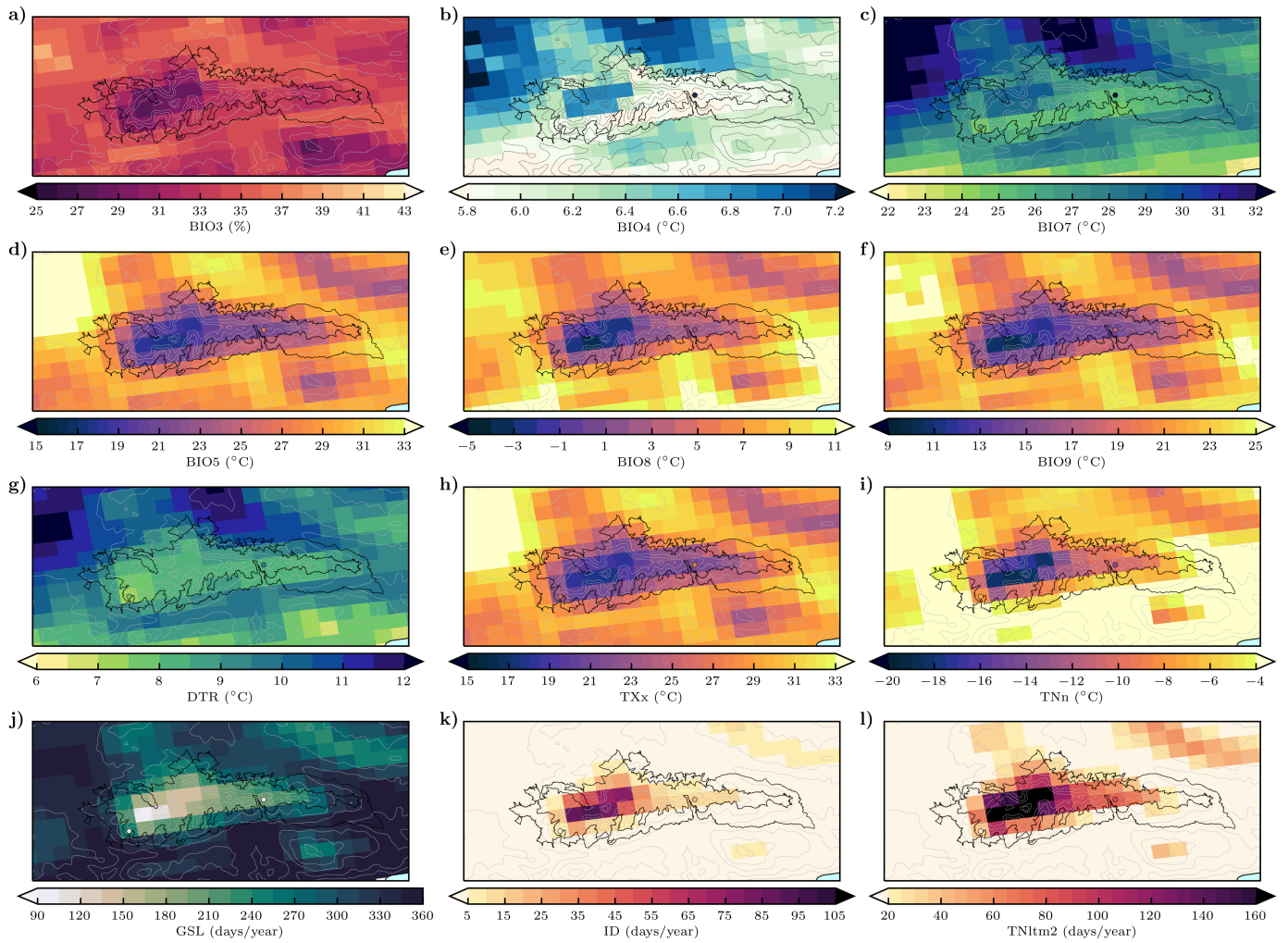
Fig. S11 CERRA temperature bioclimatic variables and extremes: (a) isothermality (BIO3, %), (b) temperature seasonality (BIO4, °C), (c) annual temperature range (BIO7, °C), (d) daily temperature range (DTR, °C), (e) maximum TX (TXx, °C), (f) minimum TN (TNn, °C), (g) growing season length (GSL, days/year), (h) frost days* (FD, TNltm2), and (j) icing days (ID, days/year).
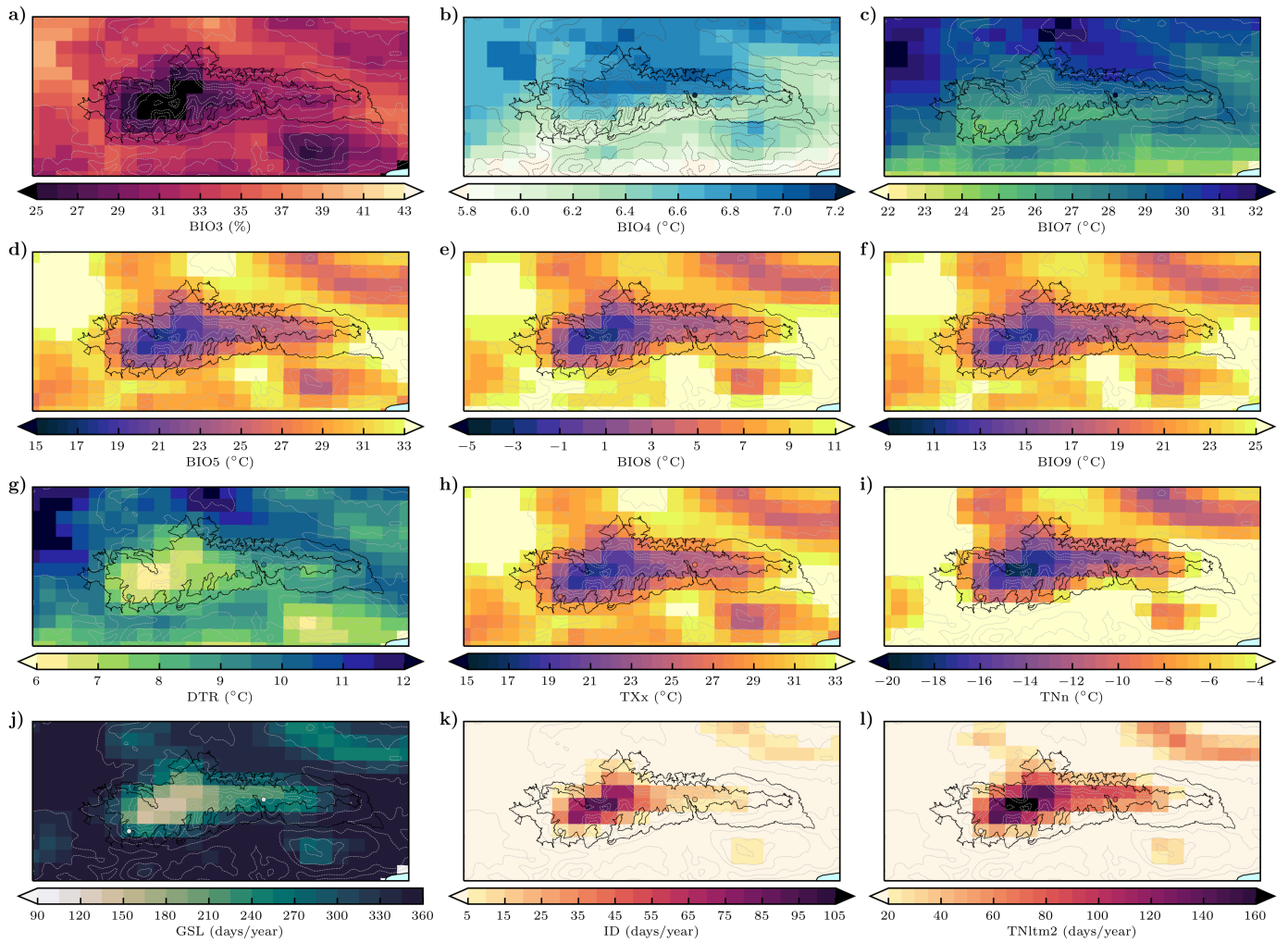
Fig. S12 05-WRF temperature bioclimatic variables and extremes: (a) isothermality (BIO3, %), (b) temperature seasonality (BIO4, °C), (c) annual temperature range (BIO7, °C), (d) daily temperature range (DTR, °C), (e) maximum TX (TXx, °C), (f) minimum TN (TNn, °C), (g) growing season length (GSL, days/year), (h) frost days* (FD, TNltm2), and (j) icing days (ID, days/year).
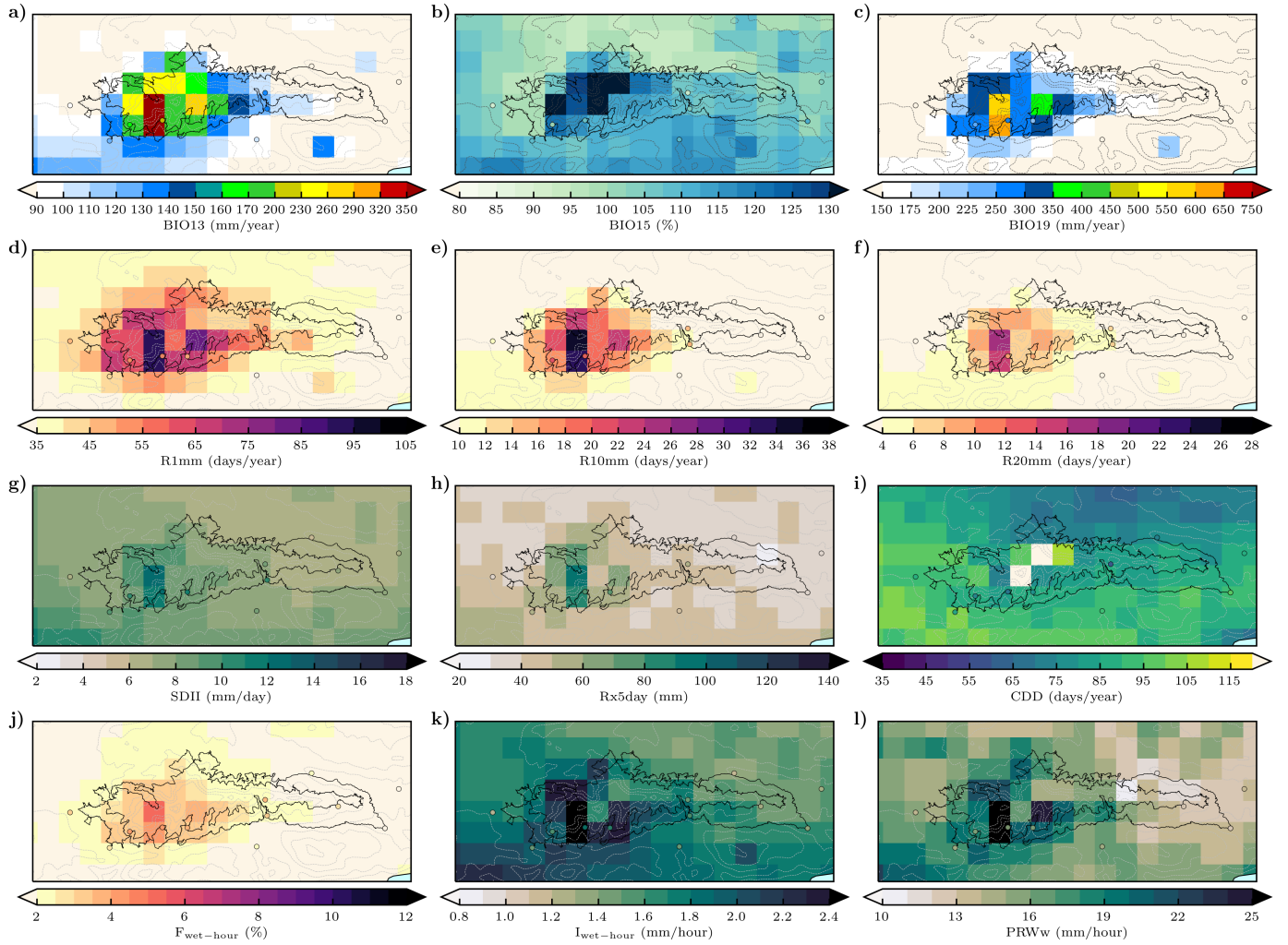
Fig. S13 GPM IMERG precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year), (j) wet-hour frequency (F wet-hour, %), (k) wet-hour intensity (I wet-hour, mm/hour), and (l) maximum amount in the wettest month (PRWw, mm/hour).
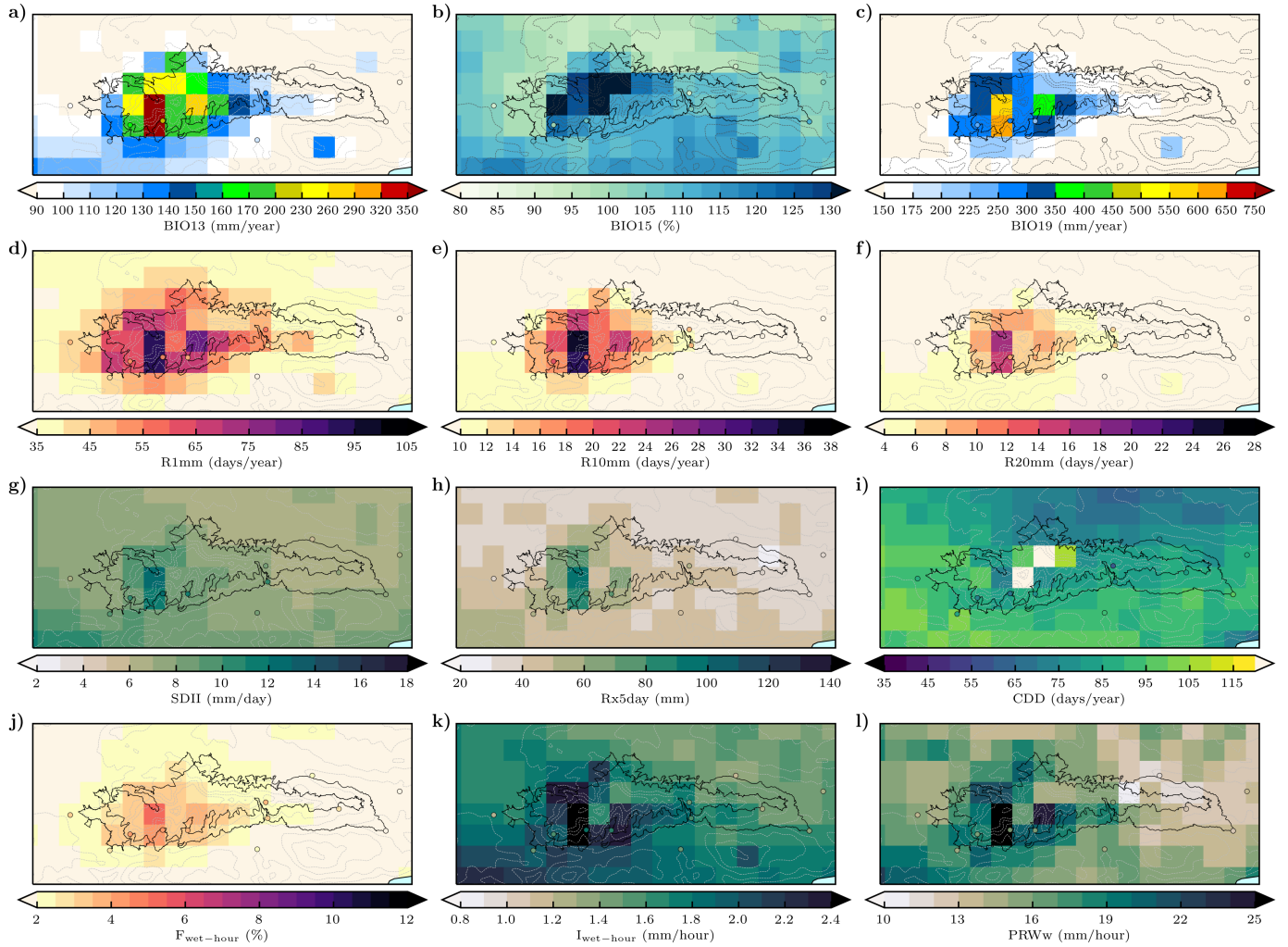
Fig. S14 ERA5-Land precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year), (j) wet-hour frequency (F wet-hour, %), (k) wet-hour intensity (I wet-hour, mm/hour), and (l) maximum amount in the wettest month (PRWw, mm/hour).
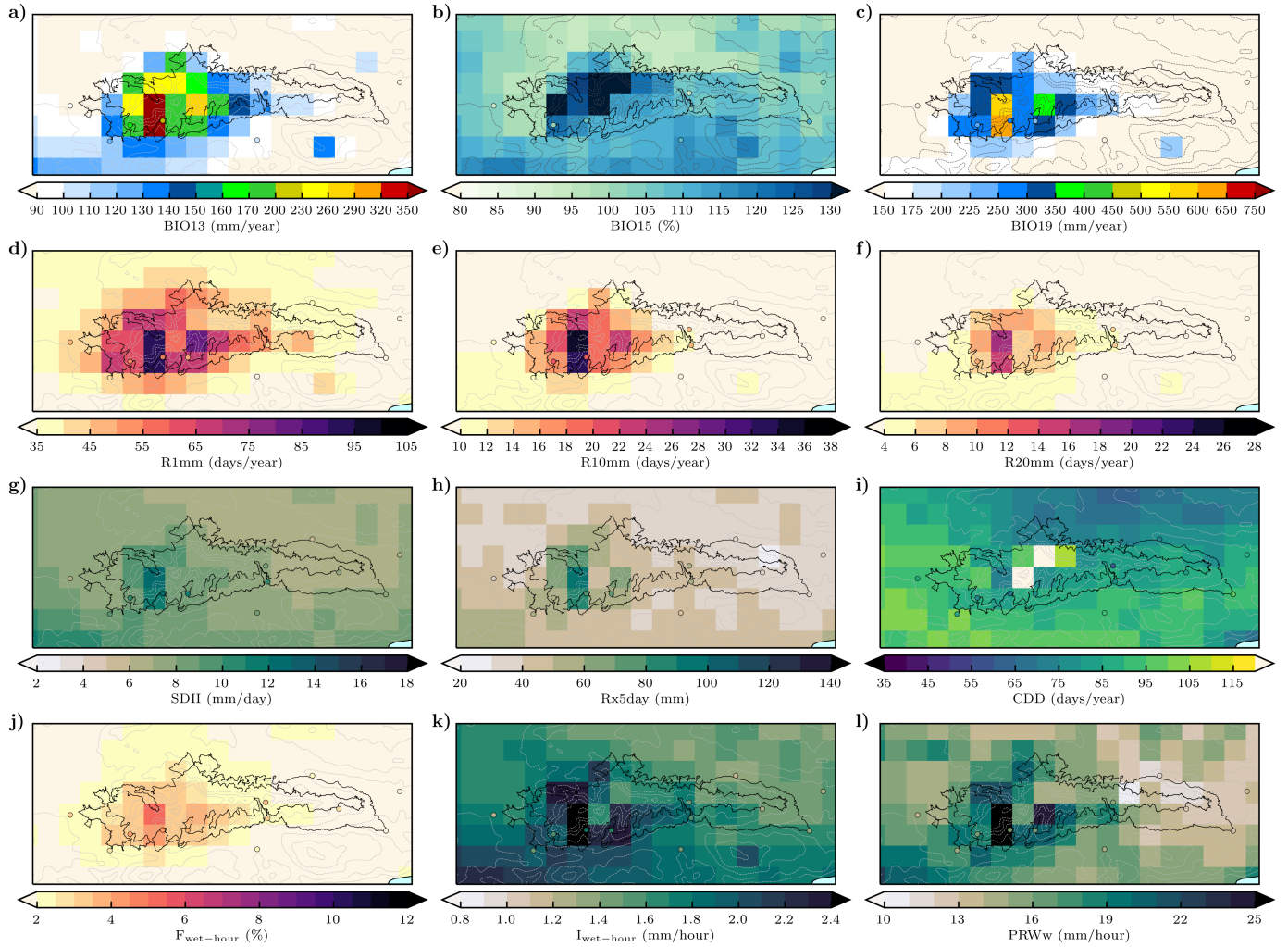
Fig. S15 CMORPH precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year), (j) wet-hour frequency (F wet-hour, %), (k) wet-hour intensity (I wet-hour, mm/hour), and (l) maximum amount in the wettest month (PRWw, mm/hour).
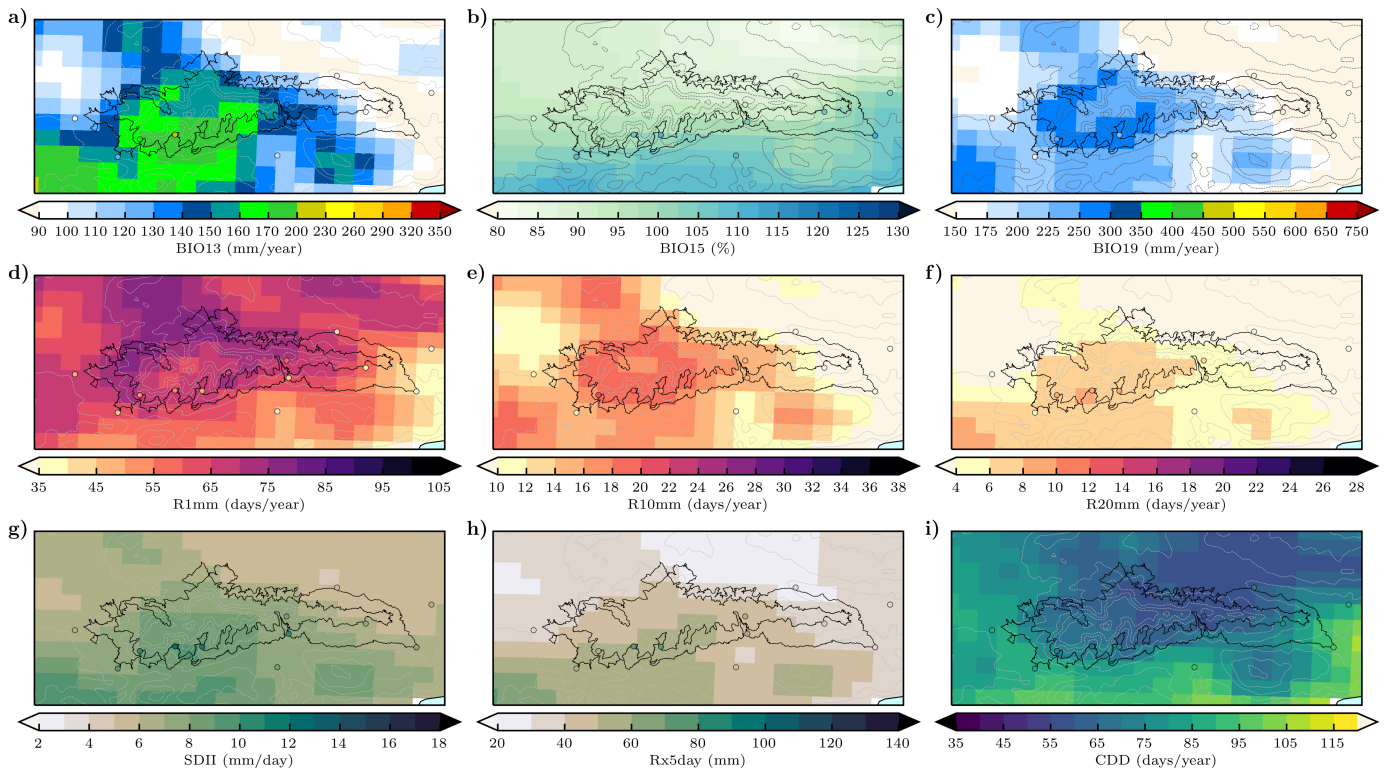
Fig. S16 ROCIO_IBEB precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year).
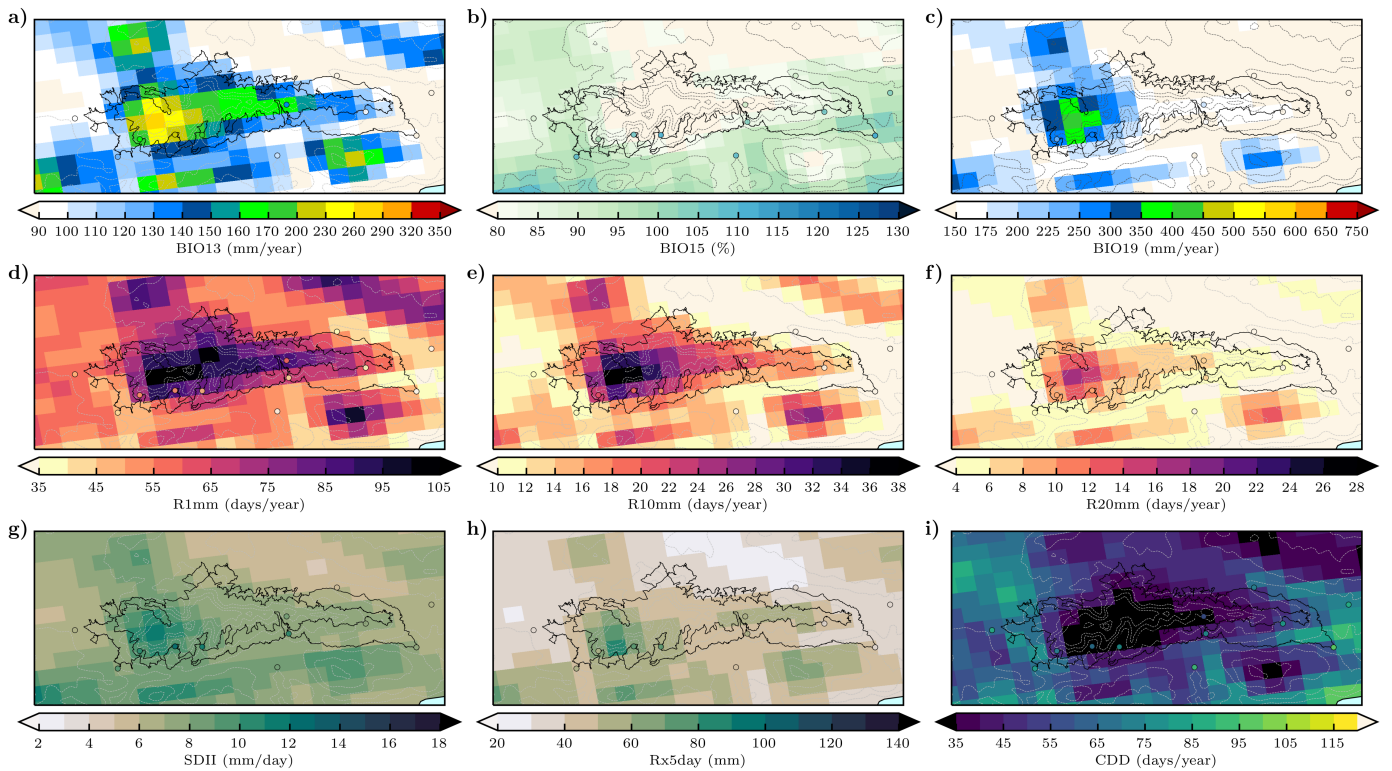
Fig. S17 CERRA-Land precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year).
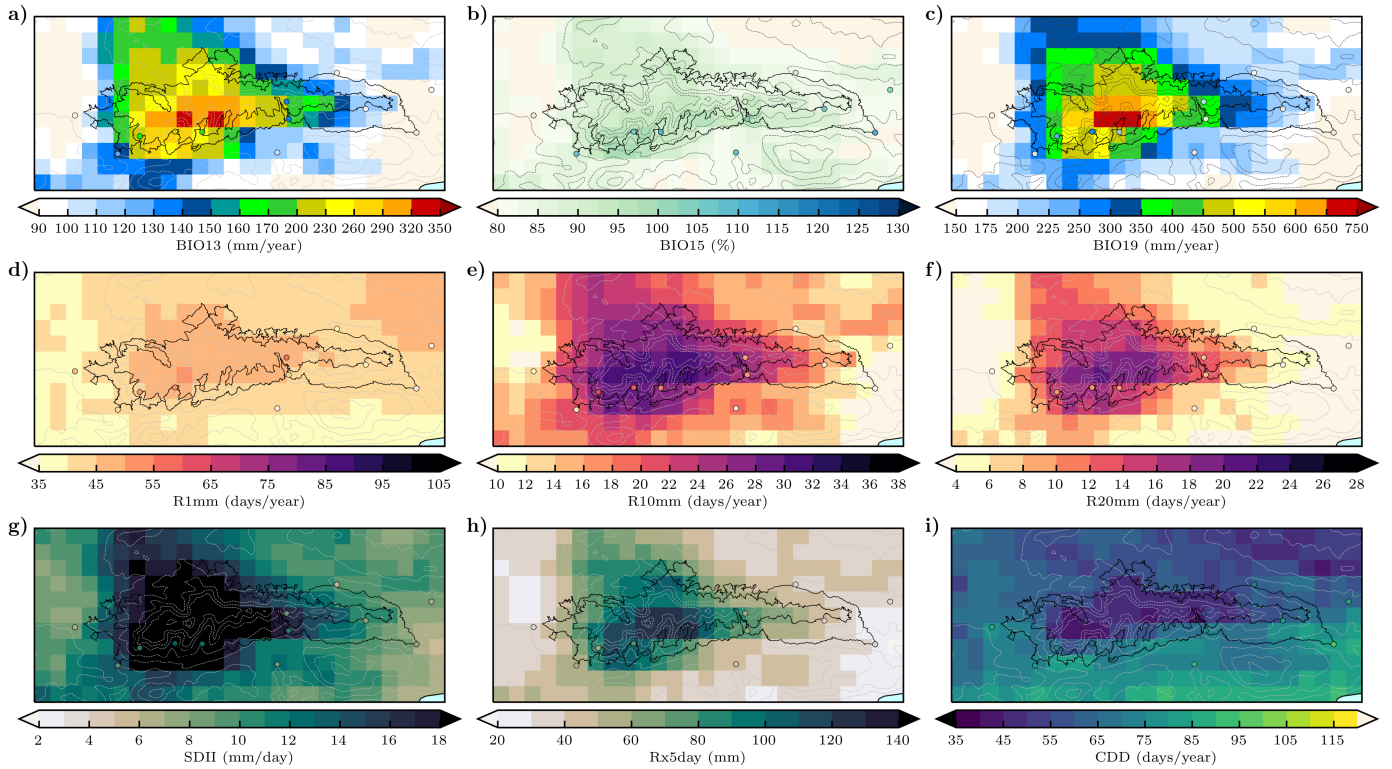
Fig. S18 CHIRPS precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year).
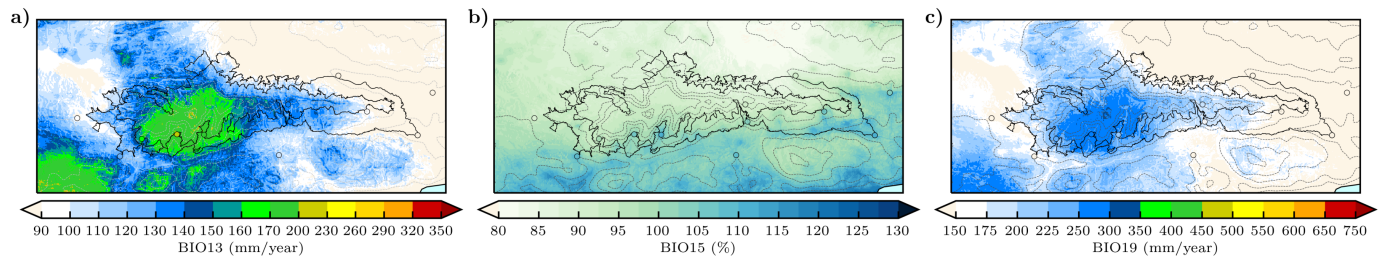
Fig. S19 GFAT-Grid precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), and (c) precipitation in the coldest quarter (BIO19, mm/month).
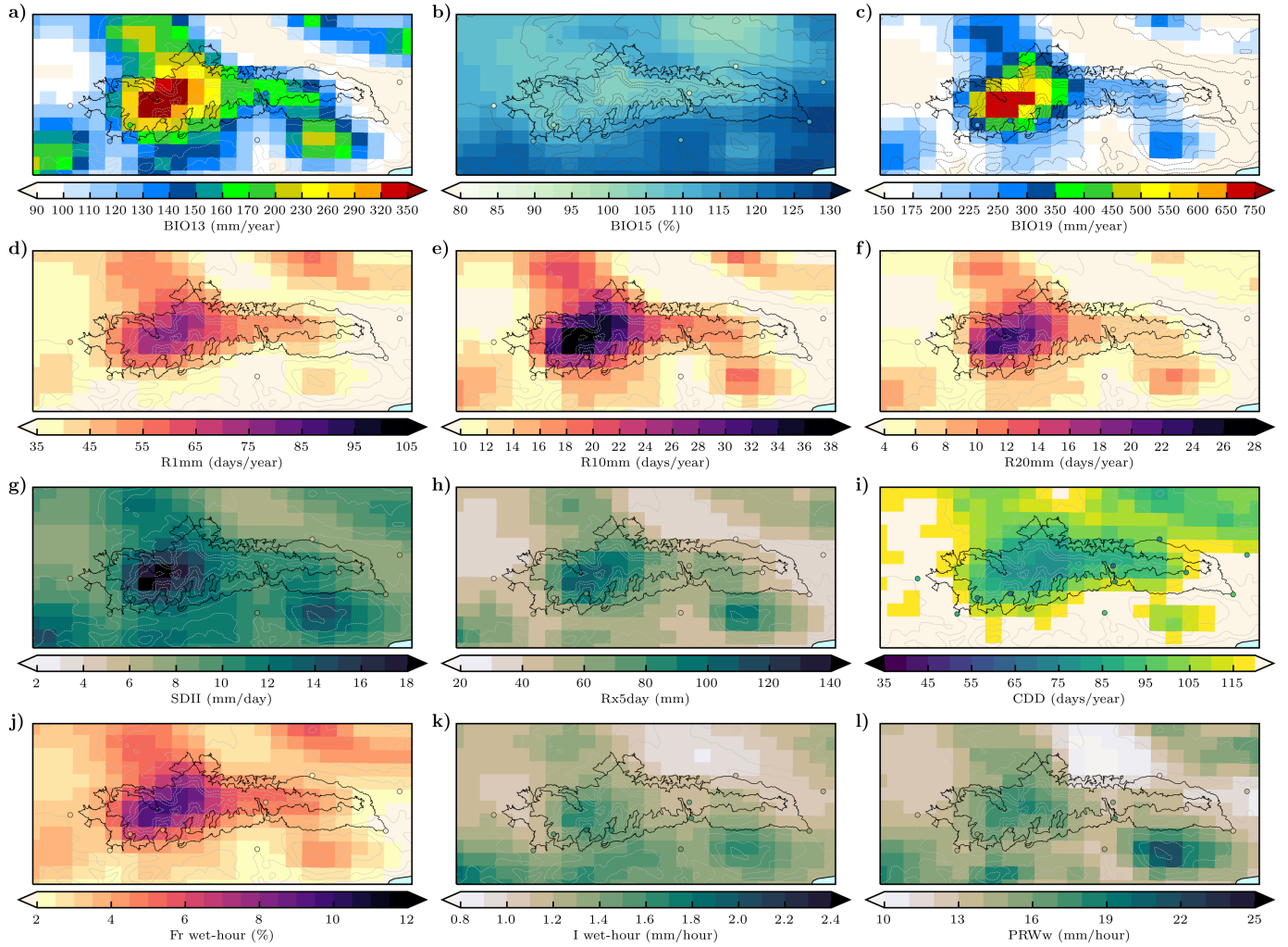
Fig. S20 05-WRF precipitation bioclimatic variables and extremes: (a) precipitation of wettest month (BIO13, mm/month), (b) precipitation seasonality (BIO15, mm/month), (c) precipitation in the coldest quarter (BIO19, mm/month), (d) wet days (R1mm, days/year), (e) heavy precipitation days (R10mm, days/year), (f) very heavy precipitation days (R20mm, days/year), (g) simple daily intensity index (SDII, mm/year), (h) maximum 5-day precipitation (Rx5day, mm), (i) consecutive dry days (CDD, days/year), (j) wet-hour frequency (F wet-hour, %), (k) wet-hour intensity (I wet-hour, mm/hour), and (l) maximum amount in the wettest month (PRWw, mm/hour).