

Supplementary Material

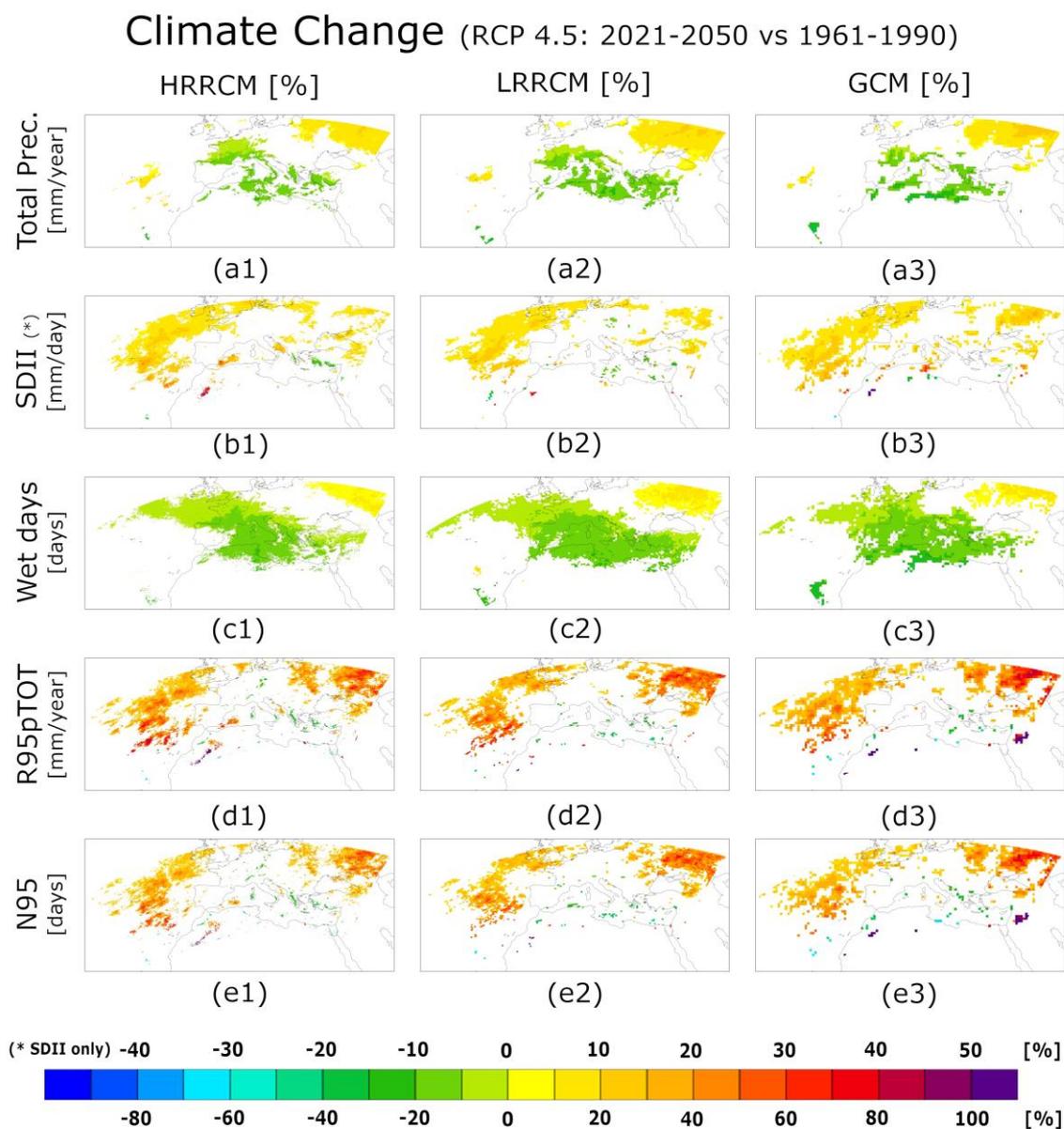


Figure S1:

change (percent, %) of the indexes defined in Section 2.2 in the RCP4.5 scenario simulation. All panels show the difference between the 1961-1990 and 2021-2050 periods according to the HRRCM (first column), the LRRCM (second column), the GCM (third column). White areas denote points where differences are not significant at the 5% significance level. Positive values denote higher index values in the near-term (2021-2050) period. Along the color bar, upper labels refer to SDII, the bottom ones refer to all the other indexes.

Climate Change (RCP 4.5: 2071-2100 vs 1961-1990)

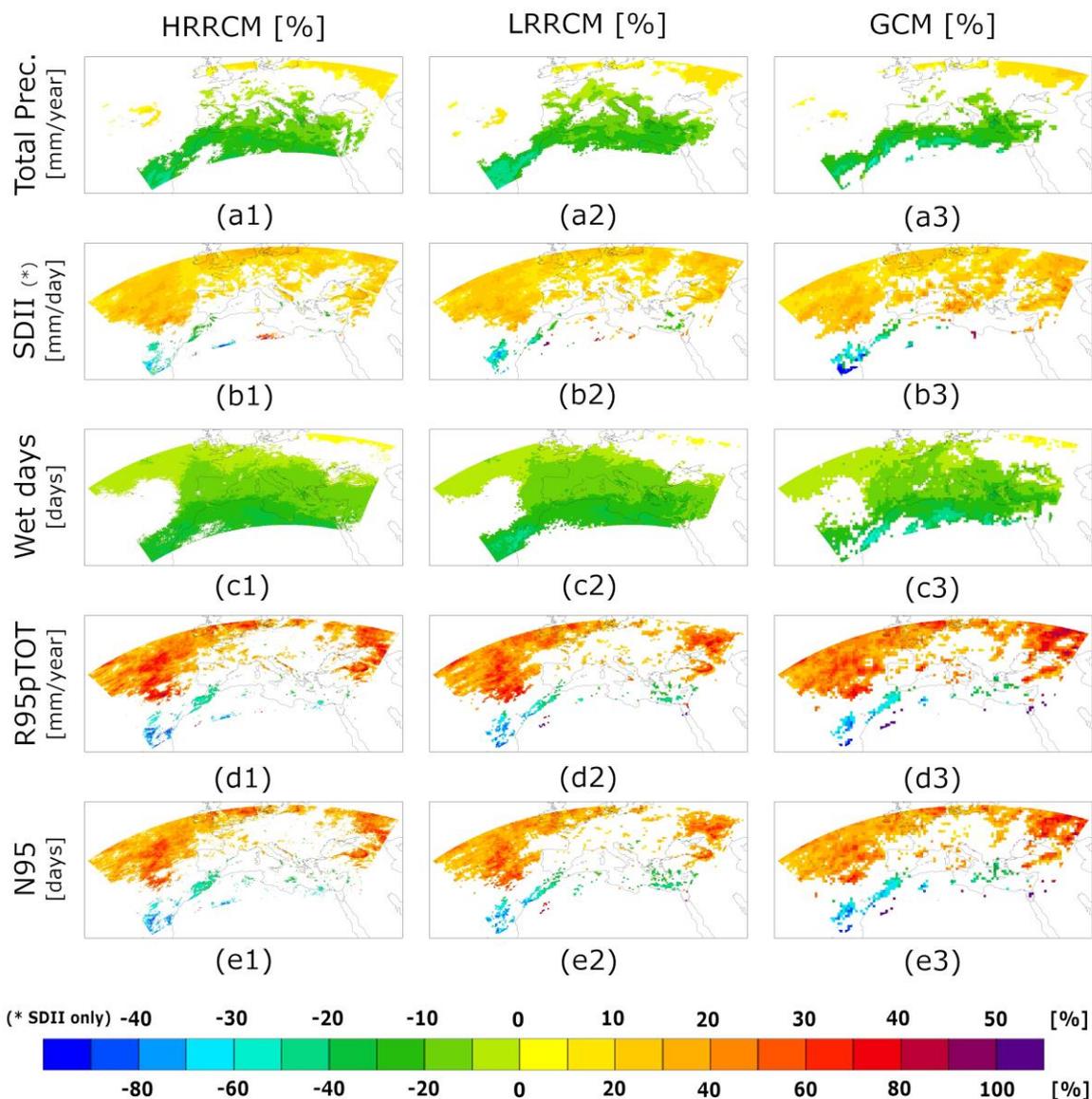


Figure S2:

change (percent, %) of the indexes defined in Section 2.2 in the RCP4.5 scenario simulation. All panels show the difference between the 1961-1990 and 2071-2100 periods according to the HRRCM (first column), the LRRCM (second column), the GCM (third column). White areas denote points where differences are not significant at the 5% significance level. Positive values denote higher index values in the future (2071-2100) period. Along the color bar, upper labels refer to SDII, the bottom ones refer to all the other indexes.

Climate Change (RCP 8.5: 2021-2050 vs 1961-1990)

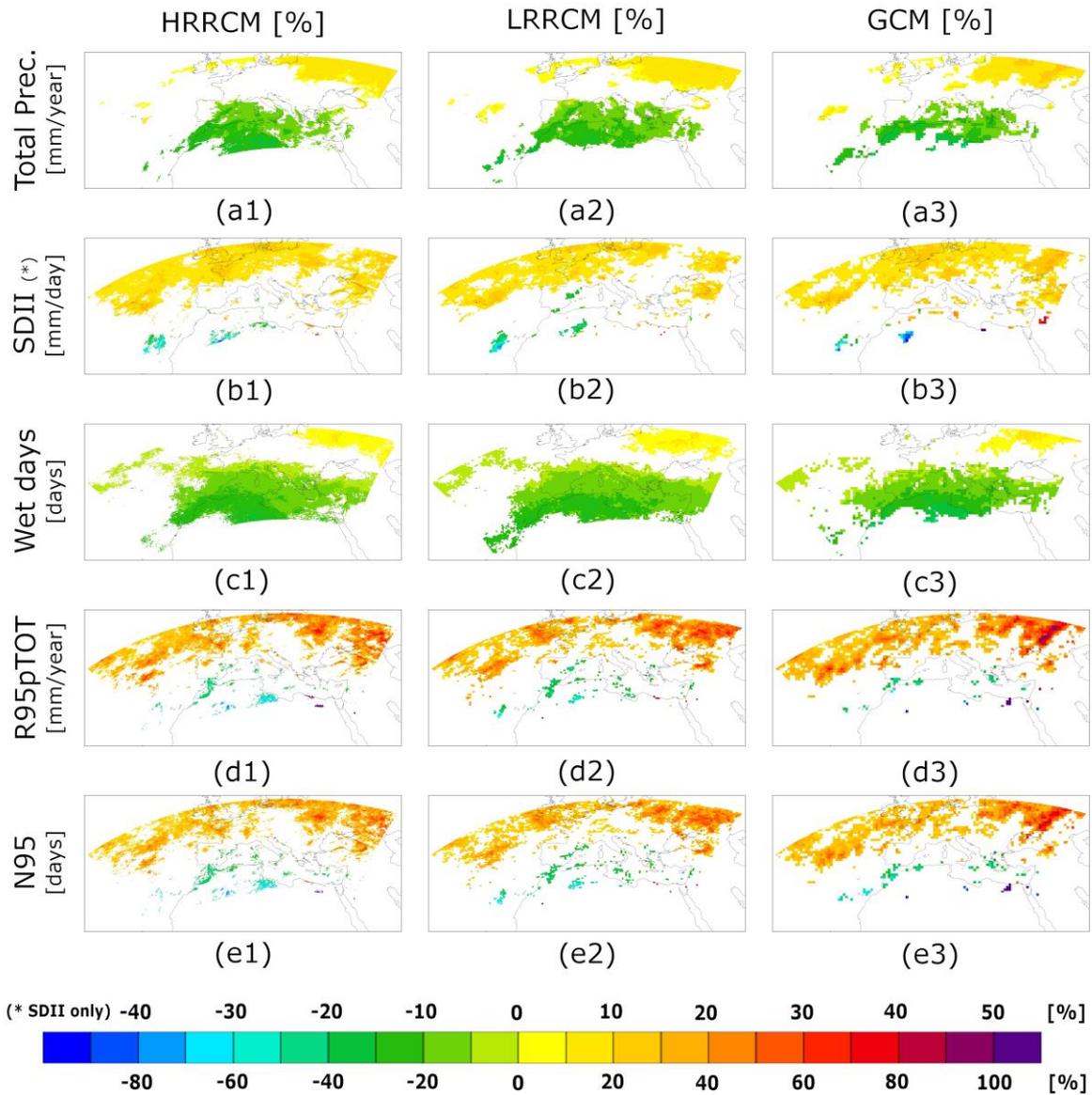


Figure S3:

change (percent, %) of the indexes defined in Section 2.2 in the RCP8.5 scenario simulation. All panels show the difference between the 1961-1990 and 2021-2050 periods according to the HRRCM (first column), the LRRCM (second column), the GCM (third column). White areas denote points where differences are not significant at the 5% significance level. Positive values denote higher index values in the near-term (2021-2050) period. Along the color bar, upper labels refer to SDII, the bottom ones refer to all the other indexes.

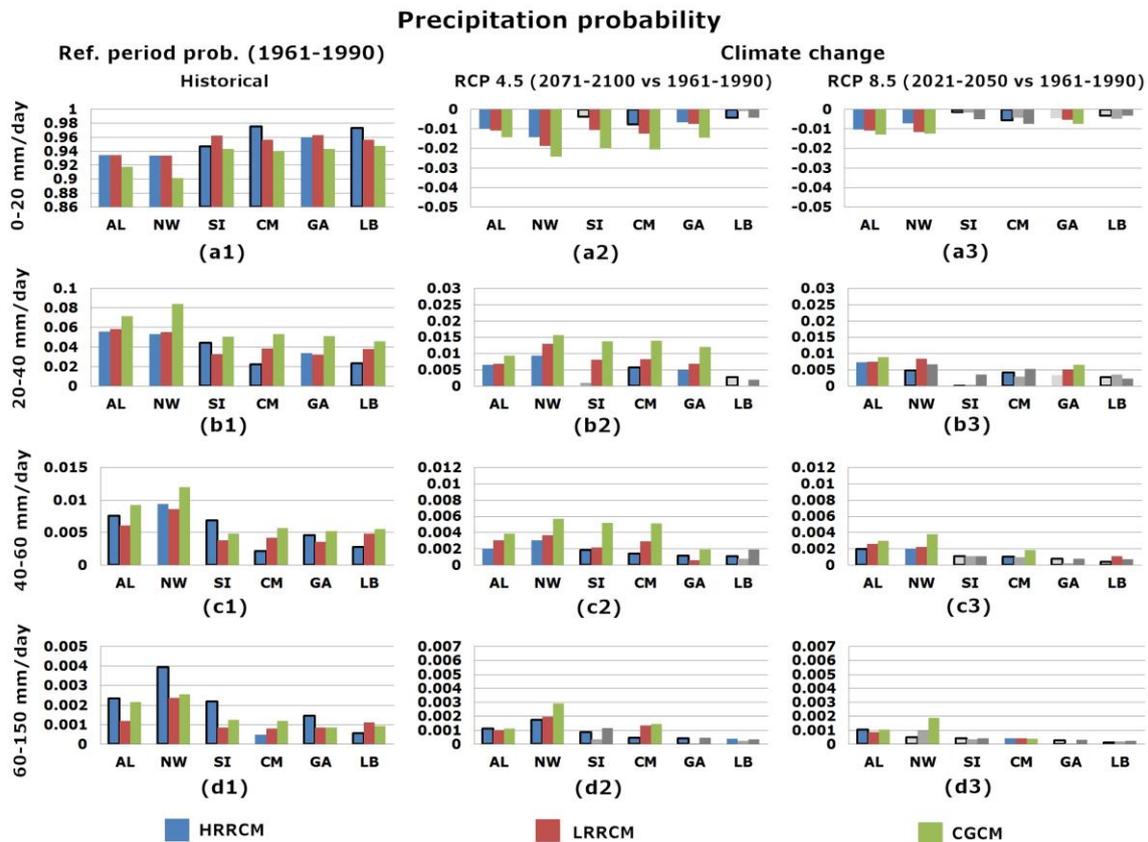


Figure S4:

probability of daily precipitation as function of intensity range and its variation with climate change. All values are computed under the condition of day being a wet day. Panels a1–d1 (first column) show a discrete Probability Density Function (PDF) of rain for the reference period (1961-1990) considering 4 ranges of intensity: weak (0-20mm), medium (20-40mm), strong (40-60mm) and intense (above 60 mm). Second and third columns show the PDF change for the RCP4.5 (long-term, 2071-2100) and RCP8.5 (near-term 2021-2050) scenarios with respect to the reference period(1961-1990). Grey bars denote differences that are not statistically significant. A bold border of blue bars denote differences between HRRCM and LRRCM that are statistically significant.