



## **Changes of temperature and precipitation in the Mediterranean region from the Last Glacial Maximum to the end of the 21st century**

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The climate of the Mediterranean region from glacial conditions to future warming is analyzed using a set of 11 models, with simulations reproducing the last glacial maximum (LGM), the mid-Holocene (MidH), the pre-industrial period (PIC, used as control experiment) and a high emission Representative Concentration Pathway scenario in the last 30 years of the 21st century (RCP8.5). Comparing the two most distant climatic conditions (LGM and RCP8.5) models show that mean annual temperature in the Mediterranean region has changed at a larger rate than the global mean. However, while the total annual global precipitation has been gradually increasing with global warming, the precipitation in the Mediterranean has increased from the LGM to the PIC and decreased afterward, until the end of the 21st century. Both the LGM and the RCP8.5 in the Mediterranean show drier condition than PIC (about 6% and 2% drier, respectively). On the other hand, model simulations in the MidH show small changes with respect to PIC for mean annual temperature and total precipitation. This is because contrasting changes along the annual cycle of MidH compensate each other: the MidH summer is warmer than PIC, while the rest of the year is mildly colder; the MidH spring is wetter, while the rest of the year is slightly drier than PIC.