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## Precipitation and temperature regime over Cyprus as a result of global climate change

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**Abstract.** In this study, the impact of global climate change on the temperature and precipitation regime over the island of Cyprus has been investigated. The analysis is based on daily output from a regional climate model (RCM) at a high horizontal resolution (25 km) produced within the framework of the EU-funded ENSEMBLES project. The control run represents the base period 1961–1990 and is used here as reference for comparison with future predictions. Two future periods are studied, 2021–2050 and 2071–2100. For the study area and over the study period, an analysis of the changes associated with the temperature regime and the hydrological cycle, such as mean precipitation and drought duration, is presented. Variations in the mean annual and seasonal rainfall are presented. Changes in the number of hot days/warm nights as well as drought duration are also discussed. These changes should be very important to assess future possible water shortages over the island and to provide a basis for associated impacts on the agricultural sector.

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