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Climate change projections for the Iberian Peninsula bioclimatic classification

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The bioclimatic classification plays a relevant role in establishing relationships between ecosystems and climate. On a regional scale, this assessment allows a better understanding of the impact of climate change in the agroforestry systems. Furthermore, the climate of a region plays a significant role not only for the developmental stages of plants, assessed in agroclimatological studies, but also in the implementation of environmental policies. The worldwide bioclimatic system (WBCS) establish relationships between the worldwide vegetation types and several quantitative bioclimatic indexes.
The Iberian Peninsula is considered a climatic hotspot therefore the assessment of the impact of climate in the ecosystems is highly relevant. Towards this aim, gridded precipitation and air temperature datasets of a 6-member ensemble (EURO-CORDEX) for 1961-1990 and 2041-2070 periods for RCP4.5 and RCP8.5 are used. Detailed maps of the four major bioclimatic divisions according to Rivas-Martinez, such as, macrobioclimate, bioclimate, thermotype and ombrotype for the Iberian Peninsula are going to be presented.
Major changes in bioclimates, ombrotypes and thermotypes are projected to occur in northernmost regions, as well as, central and south-eastern areas of Iberia. The projected decrease of Mediterranean pluviseasonal areas hint at a decrease of several evergreen or deciduous forest types. Conversely, due to the projected increase of Mediterranean xeric and desertic areas it can be expected an increase of micro forests or dense shrubby lands, as well as the appearance of half deserts or low-density scrublands. Finally, the continentality index patterns revealed a strengthening of the coastal-inner climate contrasts in the future, mainly for RCP8.5.

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