

Submitted Abstract

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Abstract

Our research aims to compare the climatic dynamics of two different mountain regions, but with several similar characteristics, given their proximity. On the one hand, the Ancares mountain range, where a clearly Atlantic environment prevails because of a more northern location and above all due to a greater influence of altitude. On the other hand, the Courel mountain range, transition area from the Atlantic climate to the Mediterranean. As well, they are two geologically different territories. The geological folding originated the Ancares mountain range was more recent, and the lithological bedrock is dominated by an alternation of slates, sandstones, and quartzites. In the Courel Mountains, the bedrock is mainly represented by four lithologies (slates, quartzites, gneisses, and marbled limestones) associated with four geological periods (Cambrian, Ordovician, Silurian, and Devonian).

Traditional practices of land-use in the Iberian Northwest Mountains have shaped an organized system regulated by seasonal cycles and spatial patterns of human activity. Agriculture, cattle grazing, inadequate management of forests #selective cutting of the best trees#, the confiscation of forests owned by the Church, frequent forest fires and their recent replacement by fast-growing species, have led to a reduction of the forest area, within a mosaic of highly integrated and structured landscape. However, during the last decades, socioeconomic globalization has induced profound transformations in rural areas. The abandonment of land has diminished the extent of open space and has led to a natural expansion of the forests, although with important impacts, not always positive, on the ecological regime and biodiversity. All of this has been accentuated in the current scenario of global change, where a significant impact on the distribution and abundance of forests is expected. In the study area, the natural dynamics have also favored the expansion of the forest due to the progressive increase in temperature and the maintenance of precipitation, but with the nuance of a significant decrease in snow precipitations.