



High resolution regional climate simulations over Romania

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RegCM3 regional climate model (Giorgi et al. 1993) has been used to simulate the climate of 40 years (1961-1990) over a complex topography continental area of Europe, centered over Romania, at 10 km horizontal resolution, with lateral boundary forcing from ERA40 analysis. Skills are computed against coupled analysis and surface observations over homogeneous climatic sub-regions, with emphasis on end-spectrum range process-scale. Known and documented local specific features (low-level jets, Carpathian bi-pole structures in meridional circulations, winter baroclinic enhancement and coastal effects at Black-Sea coast, etc) representation by the regional model are analyzed in connection with locally-induced extreme events. At regional scale, the inter-annual and seasonal variability is analyzed in respect with large-scale forcing. In this respect, extreme seasonal climatic deviations representation skill over the region is discussed.