Added value of modeling regional climate over areas characterized by complex terrain: precipitation over the Colombian Andes

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The added value (AV) of the dynamic downscaling of precipitation over the Colombian territory was investigated using simulations made with the RegCM4 regional model in the context of the CORDEX experiment. The simulations were forced by two different global models (GCM) from the CMIP5 project (HadGEM2-ES and MPI-ESM-MR), cover the period 1981-2005, and have resolutions of 0.44° and 0.22°. The comparison with the CHIRPS/GPCC reference data showed that RegCM4 degrades the results of the GCMs, that is, it does not provide AV for all selected metrics and this occurs not only when going to fine scales but also when we scale up to the resolution of the GCMs.