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The CORDEX project at Institut Pierre Simon Laplace: the CORDEX-WRF perspective

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Institut Pierre Simon Laplace (IPSL) is involved in the CORDEX program through the use of the hydrostatic model LMDZ and the non-hydrostatic Weather Research and Forecasting (WRF) model. The CORDEX-WRF component of the IPSL contribution to CORDEX, in collaboration with LEGOS and INERIS, is specifically presented here.

The downscaling of ERA-interim data (1989-2008) and future climate projections using WRF at 50 km resolution will be conducted over 4 regions which are Africa, South America, Europe and a special focus on Mediterranean area (Med-CORDEX). Moreover, these simulations will be exploited in the framework of dedicated projects for each region of interest to study either dynamics, chemical transport and/or coupling processes (ocean-atmosphere, land-atmosphere, chemical-vegetation). The possible added value of higher resolution (20 km) at this time scale for the representation of extreme events, inter-annual to intra-seasonal variability will also be investigated.

This communication will present first evaluations of present climate simulations by comparison with observations and the future work that will be done for each region.