



## **Assessment of climate change for the Mediterranean with a quadruple coupled model**

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A quadruple coupled climate model is developed for the Mediterranean. It is composed of two atmospheric models and two oceanic models for both global and regional purposes. The global atmosphere is LMDZ-global, a coarse-resolution global atmospheric general circulation model. The regional atmosphere is LMDZ-Med, a regional model with spatial resolution of about 35 km over the Mediterranean. The global oceanic model is ORCA2, an oceanic general circulation model with a resolution of 2 degrees. And finally the regional oceanic model is NEMO-Med8, a Mediterranean sea general circulation model at 1/8 degree. These four models are interactively coupled together through the OASIS coupler. This quadruple coupled system is suitable for studies on the teleconnections between the Mediterranean climate and the global climate. The whole coupled system has been run with observed concentrations for main greenhouse gases from 1951 to 2000, and for IPCC-A1B scenario from 2001 to 2050.