



## **Relative contributions to the budget of particulate matter in the Euro-Mediterranean region**

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The Euro-Mediterranean region has a particular morphology that impacts atmospheric circulation and climate, and is affected by several strong sources of aerosols: anthropogenic emissions from large agglomerations, especially in the Northern part of the region, desert dust from North Africa, as well as biomass burning in the Summer. Modeling PM concentrations in this region is thus particularly difficult.

The aim of this study is to obtain a state of the art of the aerosol budget over the region and to analyze, through a sensibility study, the relative contribution of the different sources.

For this purpose, simulations with the CHIMERE regional CTM have been undertaken for two periods in 2012, during winter and summer. We will present the results of the baseline simulation, which contains all the processes and sources, and their evaluation against in situ and remote sensing observations (AIRBASE PM concentrations, MODIS and AERONET AOD, and EARLINET lidar extinction profiles). Results from a series of simulations for which each key process (emission type, boundary conditions, etc.) is cut down separately will then be presented.