

Poster.1: . **Investigating the added value of the Convection Permitting Model CNRM-AROME over the Island of Corsica**

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Abstract

For the Mediterranean region, recent studies have shown the added value of Convection Permitting Models (CPMs) when compared to Regional Climate Models (RCMs), in particular for extreme precipitation. However, the added value is yet to be determined for mediterranean islands, where the complex orography, coastal line, and the specific island atmospheric processes are especially important to simulate climatic conditions. For these reasons, Islands are ideal testbeds to explore the potential of using CPMs.

The objective of this study is to investigate the added value of the 2.5 km resolution CPM CNRM-AROME for the mountainous Mediterranean island of Corsica. For that, hourly simulated data from: a) the 12 km resolution RCM ALADIN (following the EURO-CORDEX protocol), and two simulations of the CPM CNRM-AROME over two different domains, b) the pan-Alpine domain (following the CORDEX FPS Convection project) and c) the northwestern European domain (defined through the EUCP H2020 project) are compared with 17 hourly weather station data across Corsica for the 2000-2018 period. Preliminary results show an improvement of the simulated distribution of hourly precipitation of CPM simulations when compared to the RCM simulation. These results can be attributed, not only to the better simulation of convective processes by the CPMs, but also to a better representation of the complex orography of Corsica.