

My coauthors and I would like to thank the reviewer for the advises that greatly have helped to improve our manuscript “The climate change signal in the Mediterranean Sea in a regionally coupled atmosphere-ocean model”. The review comments point-by-point response are reported in blue whereas our answers are in bold letters.

Referee #1: «...it is promised (in the abstract, 1st sentence) that the role of the ocean feedbacks to the atmosphere is assessed. It would be of interest to learn about that and what impact the interactive ocean might have on the REMO’s atmosphere simulation. But this discussion is missing. Only one projection run without any reference (e.g. ocean driven offline by stand-alone REMO in the coupling area) or discussion with respect to published results is a bit weak. »

Response: Thank you for the suggestion. Initially, we only tried to assess the downscaled climate change signal in the ocean and not in the atmosphere, it could be wrongly expressed in the abstract “Line 1”. In the section 3.1 of the revised manuscript we have added the differences between ROM (coupled) and stand-alone REMO forced by ERA-Interim (see Fig. 4) with the aim to analyze the role of the interactive ocean on the REMO’s atmosphere simulation. In addition, you can find the discussion of our new results later in section 4.

Referee #1: «Also, missing is the discussion with respect to newer literature (e.g. Darmaraki et al. 2019 with common co-authorship and use of ROM, too). There are no recent references listed and discussed. Especially, literature from the Med-CORDEX activity (which is mentioned) special issue (see Somot et al. 2018) is ignored at all. »

Response: Thank you. We have updated the introduction and the discussion in the revised manuscript. We discuss the relevant literature (e.g. Akhtar et al. 2018; Macias et al. 2018; Darmakari et al. 2019) from the recent Med-CORDEX activity special issue to provide a more critical vision respect to the state of the art (see section 4).