

Anonymous Referee #2

Received and published: 6 June 2011

The manuscript is based on the description and the analysis of two numerical simulation case study of the coastal circulation along the eastern Adriatic Sea coast. The case studies considered the two main winds blowing over the area: The Bora and the Sirocco. The numerical simulations were carried out using two different set of Atmospheric surface forcing functions, both of them originating from operational analyses, but having different horizontal resolution. The manuscript describes the differences in coastal circulation arising by the use of the two forcings set. Obviously the use of the more resolved forcing seems to give better results, but the only sort of "validation" carried out is done against fields of AVHRR SST and it is done in a very vague way. I think that before recommending publication a revision of the manuscript is needed. The revision should aim to quantify better the improvement of the model skill arising from the use of a more resolved atmospheric forcing.

*The aim of the study, which is result of activities of the ECOOP project, is primarily to inspect the differences in sea forcing produced by two models at different resolution. As we already pointed in the answer to Reviewer #1, comment 7, we certainly agree that comparison with measurements would be highly desirable. However, during the ECOOP project, such measurements were not available along the eastern Adriatic coast. Thus, we used a available set of satellite data and wintertime experimental results for different time period given in the study of Andročec et al. (2009), and they both support our modeling results. In the revised version of study we expanded our discussion regarding a comparison of satellite and modeled SST (Section 4.2, 5<sup>th</sup> paragraph) as follows: 'In the future, these coastal features should be better verified by in situ measurements, since it is well known that satellite SST data are less reliable in the vicinity of the coast. In addition, Sirocco events are generally accompanied with high cloudiness, especially close to the coast. This is due to forced convection of the warm and moist air along upstream topographical obstacles (islands and the mainland). Accordingly, the quality of satellite data in the vicinity of coast during Sirocco is additionally deteriorated.'*

*More formal quantification of models skills would certainly be very valuable (as we emphasized in the last paragraph of Section 5), but it requires a reasonable amount of experimental data, which are still not available. However, results of this study may serve in design of dedicated field experiments in the area.*

*Finally we emphasized the importance of future quantification in the last paragraph of the section 5 (see Response to Reviewer #1, comment 7.).*