

Dear Editor,

thank you very much for your detailed and helpful comments which have been addressed in the sections below.

Too frequently you use of “low”, “high”, “above”, below” etc. for quantities unrelated to elevation. Some specific cases are noted below but there are many other cases in the text. Related to this, the negative signs for heat flux values makes difficulties in comparing them as large or small. Fluxes from sea to atmosphere would be positive and comparisons less confusing.

Response: The stated adjectives have been replaced by appropriate adjectives for quantities unrelated to elevation. Also, the sign of the turbulent heat fluxes has been changed to positive (i.e., to upward) and figures (4 & 6) and corresponding text have been modified.

Line 13. Last “the” → “a” and line 14, “the” → “a”

Response: „the“ has been replaced by „a“ in both lines.

Line 18. “The prerequisites” → “Likely prerequisites”? [The reviewers might still complain that you have not proved that these aspects are necessary as you assume, although most would agree that they are.]

Response: „Likely“ was added to the sentence.

Line 21. “the 31-year long evaluation run of the Adriatic Sea climate model” → “a 31-year long run of the fine-resolution Adriatic Sea climate model”? (to avoid “evaluation run”, undefined at this stage).

Response: The sentence has been changed accordingly.

Line 33. “the water masses” → “water”?

Response: „the“ was deleted.

Line 37. Better “NAdDW is known . . .”

Response: The sentence is modified accordingly.

Line 40. “. . . mountain range (e.g.) . . .”?

Response: „range“ was added to the sentence.

Line 87. “the 31-year” → “a 31-year” (because not yet defined in this Introduction).

Response: „the“ was replaced with „a“.

Line 90. Better “several-decade-long”.

Response: „several decade long“ has been changed to „several-decade-long“.

Line 92. “contrarily to” → “contrary to” or “as distinct from”

Response: „contrarily to“ has been changed to „contrary to“.

Table 1. You could reduce the line spacing and perhaps the column width within the Table so that it fits better.

Response: The line spacing and column width in Table 1 have been reduced.

Line 140. To satisfy Referee 1 you might add explicitly “Model outputs were not interpolated in the vertical.”

Response: The suggested sentence was added at the end of the paragraph.

Line 145. Better “. . . in this study “dense waters” are defined as having PDAs equal or larger”?

Response: The sentence has been modified accordingly.

Line 153. Better “Consequently” → “I.e.” or “That is” or “Specifically” or “More precisely”?

Response: „Consequently“ has been replaced by „That is“.

Line 206. “an overestimation of the temperatures in MEDSEA” seems to contradict the MEDSEA median bias 0.00 (line 203).

Response: In order to clarify, the sentence has been modified as follows: „Median temperature bias is smaller in AdriSC-ROMS and MEDSEA, but they have the largest MAD due to an overestimation of temperatures in MEDSEA (up to 4.5 °C) and both an over- and underestimation of the temperatures between -2 and +2 °C in AdriSC-ROMS”.

Line 221. “a higher” → “larger” and “lower” → “smaller”. However, larger variability leading to smaller standardised deviations is a puzzle. How are the deviations “standardised / normalised”?

Response: „higher“ has been replaced by „larger“. The last sentence has been modified to: „This might partly explain why the AdriSC-ROMS model presents a larger bias variability in both temperature and salinity than the ROMS-hind and ROMS-full models”. The normalized standard deviations were calculated as the ratio of the standard deviation of model results and standard deviation of observations. The explanation was added to the Methods section. Also, the diagram (Fig. 2) and the text have been corrected because square root wasn't taken in the original calculation (thus variance was plotted originally, not standard deviation).

Line 242. “highly” → “strongly”

Response: „highly“ has been replaced by „strongly“.

Line 243. “return” → “turn”

Response: „return“ has been changed to „turn“.

Line 250. “above” → “less in magnitude than”?

Response: „above“ has been replaced by „less than“.

Lines 255, 262. “below” → “larger in magnitude than”?

Response: „below“ has been replaced by „larger than“.

Line 263. “lower” → “smaller”

Response: „lower“ has been replaced by „smaller“.

Line 264. “below” → “less than”

Response: „below“ has been changed to „less than“.

Line 267. “above” → “less in magnitude than”?

Response: „above“ has been replaced by „less than“.

Line 274. “highest” → “strongest”. “lowest” → “smallest” or “weakest”

Response: „highest“ has been changed to „strongest“ and „lowest“ has been changed to „weakest“.

Line 275. “. . smallest heat loss.”

Response: The sentence is modified accordingly.

Line 349. “Consequently” → “That is”?

Response: „Consequently“ has been changed to „That is“.

Line 355. “6b” → “7b”

Response: The mistake was corrected.

Line 396. Unclear what is “also (shown?) by ROMS-full”

Response: The structure of the sentence has been corrected as follows: „ However, in the Jabuka Pit, MEDSEA shows PDA values up to 29.5 kg m^{-3} in November 2014, slowly decreasing to 29.2 kg m^{-3} before the first bora event, whereas ROMS-full produces values below 29.25 kg m^{-3} around 20 December 2014”.

Line 403. “of the” → “in”?

Response: „of the Kvarner Bay“ was corrected to „off-shore from the Kvarner Bay“.

Lines 462, 464. Omit “down to”?

Response: „down to“ was omitted.

Lines 466, 468, 473. Better “highest” → “largest”. Similarly lines 478, 479 (“low” → “small”).

Response: „highest“ has been replaced by „largest“ and „low“ by „small“.

Line 538. “highest” → “largest”. Line 539; “lower” → “less”. Etc.

Response: „highest“ has been replaced by „largest“ and „lower“ by „less“.

Line 544. “. . varies between 0.5 and 1.0 km . .” or simply “. . is 0.5-1.0 km . .”

Response: The sentence has been modified accordingly.

Line 546. “. . very small (less than 500 m) . .”

Response: The sentence has been modified accordingly.

Lines 547-548. “. . 4 km to extremely small values . .”

Response: The sentence has been modified accordingly.

Line 553. “below” → “finer than”

Response: „below“ has been replaced by „finer than“.

Line 562. “. . (by 20-40 m) . .”

Response: „by“ was added.

Line 611. “contrarily” → “contrary”

Response: „contrarily“ was changed to „contrary“.

Lines 647-648. Better “. . (1) kilometre- or finer-resolution atmosphere-ocean models and non-hydrostatic atmospheric models, . .”

Response: The sentence has been modified accordingly.

Line 679. “Middle-range” → “Medum-Range”. Line 680 “Forecasts . .”

Response: The name has been corrected.

Figure 6 caption. Better “. . series of wind stresses and daily turbulent fluxes averaged . .” (order as in figure)

Response: The caption has been modified accordingly.

Supplement

S2.1, paragraph “Nucleus . .” line 5. “Medium-Range Weather Forecasts . .”

Response: The name is corrected accordingly.

S3.1, line 3 of text: “largest” → “highest” – conventionally “low” and “high” are used with temperature!

Response: „Low“ and „high“ convention is applied for temperature.

S3.2, page 9 line 5. “form” → “than in”

Response: „form“ has been replaced by „than in“.