

Interactive comment on “Changes in the Adriatic oceanographic properties induced by the Eastern Mediterranean Transient” by I. Vilibić et al.

Anonymous Referee #1

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GENERAL ASSESMENT

This is a valuable piece of work dealing with the decadal variability of salinity, temperature, dissolved oxygen and nutrient salts in the Adriatic Sea in response to the marked changes in the circulation caused by the Eastern Mediterranean Transient. The introduction is excellent but the discussion is a bit speculative. Although I have some concerns (detailed below), I feel that the manuscript would merit to be published in Biogeosciences after minor revision.

SPECIFIC COMMENTS

Page 928, line s 16–18. Please, avoid being speculative in the abstract.

Page 933, lines 23–24. More details should be provided on the method used to fit

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the time series to the seasonal cycle (Levenger-Marquard, Gauss – Newton, ...). In addition, you should present either here or in the results section the fitting parameters (amplitude and diphas of the two harmonics) and the % of the total variability of each time series that was explained by the seasonal function.

Page 934, lines 18–23. I would suggest using the Apparent Oxygen Utilisation (AOU) rather than the salinity and temperature dependent dissolved oxygen concentration to study the temporal changes in oxygen content.

Page 935, lines 24–25. The level of significance of the differences between the 1991–1998 and all-years distributions should be tested statistically and presented in the manuscript.

Page 941, summary and conclusions. The last part of this section (from page 942, line 23 on) deals with the implications of the changes produced by the EMT and, therefore, should be part of the discussion, not the conclusions.

MINOR DETAILS

Page 931, line 14. The word “different” is repeated twice. Please, erase one.

Figure 6. Please, add the acronyms of the water masses.

Interactive comment on Biogeosciences Discuss., 9, 927, 2012.