

Interactive comment on “Long-term trends at the Time Series Station Boknis Eck (Baltic Sea), 1957–2013: does climate change counteract the decline in eutrophication?” by S. T. Lennartz et al.

Anonymous Referee #1

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Review of 'Long-term trends at the time series station Boknis Eck (Baltic sea) 1957-2013: does climate change counteract the decline in eutrophication?' by Lennartz et al.

Recommendation: Minor revisions

This study reports on the trends in mean and extreme quantiles of various oceanographic and biological variables from the Boknis Eck station. It uses modern time series analysis methods and model simulations to evaluate the changes at this station. I don't have much of a background in biogeosciences so my review will focus on the time series part of the study; but the whole study seems to be sound and is also

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well written.

The study uses modern statistical techniques for time series analysis like Mann-Kendall trend test and quantile regression.

1) In section 2.1 it is stated that the quality of the data are high. I assume that over the long observation period the measurement instruments have been replaced a few times. Has it been checked whether this affects the time series? It is well known that such effects can affect trends in surface air temperatures for example.

2) Page 7619, line 15: What do you mean by 'shifted to the 15 each month'? Has this been done by interpolation?

3) It is stated that the time series has two breaks. Does this mean that whole years are missing or just a few months in the given periods?

4) How sensitive are the results to the way the data are averaged?

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