

## ***Interactive comment on “Satellite detection of multi-decadal time series of cyanobacteria accumulations in the Baltic Sea” by M. Kahru and R. Elmgren***

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This paper (which I reviewed in an earlier version a few months back) deals with quantifying the occurrence and extent of cyanobacteria blooms in the Baltic Sea. In order to obtain a long-term record the authors use a turbidity-type algorithm, together with additional criterion designed to avoid counting sediment plumes as blooms, using multiple satellites.

The authors have addressed my previous concerns (primarily by providing some level of ground truth) and I therefore recommend this paper be published. It treats a significant natural phenomena and provide a unique and relatively long data set to analyze it

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with.

I have a few minor comments that if addressed I believe will improve this paper. 1. Last sentence in the abstract is not clear. Units of FCA and chlorophyll are different. Do you mean to compare in %? 2. How are ‘valid’ and ‘turbid’ decided upon? It should be made clear better that ‘turbid’ are also ‘valid’ pixels while there are ‘valid’ that are not ‘turbid’. Using ‘valid’ to also denote days can be confusing. 3. P. 3328, l.10 : above you say you inspected visually the green wavelengths of all the sensors. Can you describe how and what you were looking for? 4. Given the ambiguity with non-cyano turbidity events shouldn’t it be better to exclude from the analysis the often turbid areas of Gdansk Bay, Gulf of Riga and eastern Gulf of Finland? 5. P. 3331: l. 21 spelling of minima l.28: was there no GPS for navigation? 6. Table 1- can you provide the center wavelength and width of the band used? 7. Table 2-5 can be merged with a column added to table 5 that has the number of scenes for each satellite.

Dear author, if any of my comments are not clear or are plainly wrong, please feel free to contact me and I will be happy to clarify/detract the comment I made.

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