

Interactive comment on “Decadal evolution of ship emissions in China from 2004 to 2013 by using an integrated AIS-based approach and projection to 2040” by Cheng Li et al.

Anonymous Referee #3

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The study investigates the ship emissions along the coast of mainland China. The paper is well written and organized, with the approach clearly described and the results fully discussed. The ship emission inventory developed in this study has a high grid resolution and a long time period coverage. Such emission estimates along with datasets are interesting and should be a welcome addition to both global and regional emission inventories. The manuscript can be accepted for publication in ACP subject to minor revisions. Below are my questions/suggestions in detail.

Both global and regional (Asian) ship emission inventories have been developed before this study. The advantage(s) of the ship emission inventory developed in this study over

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previous ones are not sufficiently highlighted in the manuscript. In the Conclusions, the authors may give some suggestions for the modelers and other users who want to make a choice among different ship emission inventories.

BC and OC are important components for air quality, visibility and climate simulations, and they are included in nearly all emission inventories for modeling purpose. However, BC and OC are not considered (or reported) in this work. Is it easy to add these two components?

Technical issues: P3, L13: The literature (He et al., 2015) cannot be found in the References list.

P4, L4: Better to provide specific names of the three classification schemes.

P26, Fig.5a: Should the line colors of the cost match those in the pie? Green color (for YRD in the pie) cannot be found in the lines for the cost.

P28, Fig.7: The current color bar is not clear to see. Are the ship emissions associated with Taiwan ports taken into account? How about the emissions over the South China Sea?

The term 'HC' is used in the text while the term 'VOC' is given in Tables 8 and 9. There are so many abbreviations used in the manuscript. The authors might consider giving a list of abbreviations as Appendix?

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