

Interactive comment on “Impact of biomass burning on surface water quality in Southeast Asia through atmospheric deposition: eutrophication modeling” by P. Sundarambal et al.

Anonymous Referee #2

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General comments:

The present study is on nutrients from atmospheric deposition in the coastal water, and their contribution to eutrophication. Besides physical processes (advection – diffusion), biochemical interactions between non-conservative quantities are also considered. The authors used NEUTRO model to quantify water quality parameter variability due to atmospheric derived nutrients and predict the resultant nutrient and phytoplankton dynamics in the coastal region of Singapore. The study provides new information on haze nutrient composition and its impact on aquatic ecosystem for the Singapore region.

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On the whole, the paper is very interesting.

Specific comments:

Haze and no-haze periods may be explained properly for better understanding of the seasonal effects.

What is the reason for high nutrients during haze period? Are they so high enough to cause eutrophication? Is the source of atmospheric nutrients the loading and unloading of cargo in the port area?

It is mentioned in the paper that the biologically available nitrogen from atmospheric wet deposition is the source. If so, which is the nitrogen the author exactly referring to?

Technical corrections:

Language has to be improved. For example, page 7782, line 22: The need for water quality management tools has arisen as a result of increased eutrophication of coastal waters throughout the world.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 7779, 2010.

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