

***Interactive comment on “Tracing inputs of
terrestrial high molecular weight dissolved
organic matter within the Baltic Sea Ecosystem”
by B. Deutsch et al.***

Anonymous Referee #4

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This paper discussed with the input of terrestrial dissolved organic matter (DOM) to Baltic Sea from the observation data in March and August-September 2009 together with the results of Alling et al. (2008). The input of DOM from watershed to coastal region is one of important topics. The paper shows that contribution of terrestrial DOM was estimated from 43% to 83%, though substantial amounts of DOM (>50%) appear to be removed near the costal line during estuarine mixing. Figure 3 is important to understand the fate of terrestrial DOM in estuarine environments. However, the relationship between total DOM and high molecular weight (HMW: >1 kDa) fraction is lack. This data set is very important because the HMW fraction such as humic substances is significantly precipitated at estuarine mixing zone. If the differences in

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percentage of HMW vary with each sampling station or sampling area, we have to discuss it carefully. Another question is that the paper discussed with the mixture of water mass at OB site and BP-BS-BB area in Figure 2. However, the authors did not touch with the phenomena in the discussion of the DOM mixing in Figure 3. Two samples of OB sites were on the line in Figure 3a and b, but the direction of scatter from the line is difference from the OB and BP-BS-BB sites. I recommend to show us the answers above two questions.

Minor comments The word in figure caption and the manuscript is adjusted as Figure 3a or Figure 3A.

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