

Interactive comment on “DOC concentrations and spectroscopic characteristics in surface runoff from contrasting wetland ecosystems: a case study in the Sanjiang Plain, Northeast China” by L. L. Wang et al.

Anonymous Referee #2

Received and published: 4 September 2012

General comments

The manuscript presents results of DOC concentrations of wetlands with deviating site characteristics in north eastern China. The results are marginally interesting because the paper missis an in deep analysis of the different wetland sites and offers exclusively a descriptive analysis of the measured DOC characteristics. Furthermore not many new results are presented in the manuscript. There are two main concerns I have with this publication. First, data from 2009 of five of the 7 presented sites have

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already been published by the same authors without making any reference to this publication (Song et al 2011). Furthermore parts of these data have already been publish a second time in 2010 by the same authors (Wang et al 2010), once again without citing that publication in the presented manuscript and the former one of 2011. The general outcome of the two former publications and the presented manuscript are similar describing significant differences in DOC concentrations between natural and degraded wetlands. This finding did not change although an additional year of sampling (2010) has been added in the presented manuscript. A discussion of the formerly presented data and the added value of the new data presented in this manuscript is missing. The second concern I have are deficits in the description of the methodology. Soil and water sampling methodology is not very clear what makes it difficult to assess the results of the study. No information is given on the specific sampling locations within each sampling site. It is not clear what kind of surface water has been sampled (pond, stream, artificial drainage). Additional information on e.g. ph-values or redox conditions of soils are missing which may give more information for interpreting the results. Because DOC in wetland soils have already been investigated earlier a more detailed discussion on the relationship of soil organic carbon and the concentrations in surface runoff is needed.

Specific comments

Page 7920, line 25: The findings are very similar compared to results from a former publication of the same authors in 2010 and 2011 (Wang et al 2010, Song et al. 2011). There was not given any reference to this publication

Page 7923, line 2: Within the introduction refernce to the more specific DOC charac-terisitcs are missing which should give reasoning for the second and third objective of the paper

Page 7924, line 20: Were the samples taken from real surface runoff or were they taken from wetland streams?

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Page 7924, line 15: It is not clear whether the measured concentrations are representative for the wetland sites or whether the presented differences between sites may also can be related to small scale characteristics of the specific sampling site. It is well known that wetlands are very heterogeneous and specific site characteristics may have a large impact on DOC characteristics.

Figure 3: The DOC results for five of the seven wetlands for 2009 have already been published in 2011 without any reference to the publication

Figure 4: The SUVA 254 results for five of the seven wetlands for 2009 have already been published in 2011 without any reference to the publication

Missing literature:

Song, C. C.; Wang, L. L.; Guo, Y. D.; et al. 2011. Impacts of natural wetland degradation on dissolved carbon dynamics in the Sanjiang Plain, Northeastern China. JOURNAL OF HYDROLOGY, 398, 1-2, 26-32

Wang, Lili; Song, Changchun; Song, Yanyu; et al. 2010. Effects of reclamation of natural wetlands to a rice paddy on dissolved carbon dynamics in the Sanjiang Plain, Northeastern China. ECOLOGICAL ENGINEERING, 36, 10, 1417-1423.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 7919, 2012.