

## ***Interactive comment on “Riverine transport of biogenic elements to the Baltic Sea – past and possible future perspectives” by C. Humborg et al.***

**A. Ducharne (Editor)**

Agnes.ducharne@ccr.jussieu.fr

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Two reviews of the manuscript have now been achieved and published as “Referee Comments” in HESSD. The referees are acknowledged for their work and valuable comments. They both agree in finding this paper highly interesting and suitable for publication in HESS. Based on these evaluations and my own reading of the manuscript, the latter is accepted for publication in the special issue “Man and river systems: Long-term interactions between societies and nature in regional scale watersheds” with minor changes.

The authors are asked to write an “Author Comment” within 4 weeks to respond to the referee comments and attributed short comments if any, and to submit a revised version of the manuscript accordingly. In doing so, they shall address each point of the

referee comments and provide a list of the changes introduced to the manuscript.

In particular, they should be clearer about the different status between their results regarding possible future changes in N and P on the one hand, and DSi and carbon on the other hand. The assessed driving factors and related time frames are completely different, being socio-economic changes for the former and climate change for the latter. The impact of the paper would increase if this was stated. A better link between these two parts could be achieved by a discussion of the possible impacts of climate change on N and P future changes, as suggested by Referee 2.

As required by both reviewers, details and discussion should be added about the possible future changes in N and P : assumptions of the three scenarios, position with respect to the Water Framework Directive, time at which such scenarios could realize. The authors are also asked to pay a special attention to the concerns raised par Referee 1, who requires a deeper discussion about the main characteristics of the model CSIM, the modeling assumptions and the related uncertainties/significance of the model results, as such a critical evaluation is necessary before using a model as a management/decision tool. It is not enough to send the reader to other papers, their main findings must be summarized.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 1095, 2007.

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