

***Interactive comment on “Understanding and managing a complex estuary: the process towards more congruence between the physical system characteristics and the management system of the Westerschelde (Netherlands)” by A. van Buuren and L. Gerrits***

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This paper deals with the interrelations between the social system and the physical system of an estuary and the intermediate role of the management, policy and research systems therein. The reciprocal relationship between the social and physical systems is then analysed in terms of the social systems adaptive capacity.

I commenced reading this paper with deep interest and a considerable appreciation of

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the difficulty of the task that the authors had set themselves. Unfortunately, I find the paper to have a number of fundamental weaknesses, namely:

1. The understanding of the hydro-morphological and ecological issues is superficial and the explanations provided are weak. As this forms the basis of the argument about congruence of the physical with the social system, I consider that the authors need to take more care here and at the least consult and reference the research documents on the morphology and ecosystem of the estuary. These include, but are not limited to the research undertaken for the Long Term Vision and the subsequent morphological modeling studies undertaken by WL|DELFT HYDRAULICS.
2. The choice to confine the study to the Westerschelde and not the Schelde Estuary as a whole is not justified in the paper.
3. The choice to view the social system in terms of an adaptive paradigm is stated rather than well argued. While I agree that this provides a useful perspective, the authors should devote some attention to other possible paradigms and state why they do not choose to use these in their evaluative framework. Instead the authors impose their own value judgements in statements like “This will help to make adaptive, integral and fine-tuned management interventions possible and endure longer”.
4. The authors have focused their arguments on the three focal points arising from the Long Term Vision for the Scheldt Estuary, namely accessibility for shipping, nature development and safety from flooding. Consequently, they have ignored the other user functions such as fishing, farming, recreation and other policy issues such as land use planning and hazard management (shipping and industrial accidents). In so doing, they have fallen into the self-referential behavioural trap of which they accuse policy makers, managers and researchers.

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Despite this severe criticism of the paper, I wish to encourage the authors to persist in their research. It is precisely at this interface between the social and physical sciences that many insights are to be gained. However, to publish in this field you need a deep and well grounded analysis in BOTH fields.

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