

Interactive comment on “Spatial and temporal aspects of greenhouse gas emissions from Three Gorges Reservoir, China” by Y. Zhao et al.

Anonymous Referee #2

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Three Gorges Dam is the largest hydroelectric project in China, and arguably the most controversial dam with particular concerns on ecological and environmental consequence. It is thus interesting to see how Dam construction will affect greenhouse gas emission, which is presumably a major concern for global climate change. Zhao and Coauthors have poured huge effort for determinations of CH₄, CO₂ and N₂O flux from the water surface along the reservoirs of the dam. Putting a chamber on the flowing water is really not that easy for GHG measurements. More importantly, the seasonal patterns of GHG emissions were determined from many sites covering the entire reservoir regions including mainstem, tributary, upstream and down streams. The authors further estimated the annual flux of GHG from the reservoir of the dam, compared the GHG budget with other plants worldwide. These results are of great interest for public and policy maker.

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My major concerns are that GHG determinations need to be described in more details. In doing so, these data could be of great help for further studies, and for predictive understandings of GHG budget from the reservoir.

Other comments can be seen in the annotated version. In addition, please note that (1) Abbreviations and acronyms are often defined the first time they are used within the abstract and again in the main text and then used throughout the remainder of the manuscript. Please consider adhering to this convention; (2) One term should be consistently employed throughout this manuscript; (3) It is expected that your figure legends will be quite detailed and very precise. In fact, from the figure title and the axis labels of a graph/table the reader should be able to determine the question being asked, get a good idea of how the study was done, and be able to interpret the figure without reference to the text.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/9/C6939/2012/bgd-9-C6939-2012-supplement.pdf>

Interactive comment on Biogeosciences Discuss., 9, 14503, 2012.

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