

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

**Y. Zhao et al.**

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Dear referee, thanks for your comments. I understand that bubble emission from reservoirs is important for many tropical reservoirs or shallow reservoirs in other regions. During our monthly field campaigns, we occasionally see small bubbles in the most upper stream of the tributary at the lower water level period (in May and June) and with very low frequency, when comparing with the large area of the reservoir, we think that have little impact to the total emission from the reservoir. The Three Gorges Reservoir offers particularly unfavorable conditions for methane production or even bubbles fetching the surface water: great depth(70 m on average) and with steep slopes on both bank sides, low organic carbon in the sediment (averagely 33.69 gTOC/kg in the Xiangxi tributary and 13.65gTOC/kg in the mainstream, data was obtained on August,

2011), and well mixed in the whole water column. What's more, from 19 to 23 June, 2012, we organized an international workshop about comparing GHG measurement methods and invited Dr. Tonya DelSontro from Eawag, who studied methane bubbling in a large tropical reservoir in Zambia using an echosounder system. Tonya brought the system and made several navigations started from upper reach of one small tributary and then through the mainstream and then into another small tributary. We found little bubbles in the area, and even in the upper stream of the tributary, where there was a small river injected in, and Tonya thought there should be many bubble eruptions. The data collected at the workshop is under processing and detailed work focusing on bubbling in the small upper regions of the tributaries is underway. Yours sincerely! Yan ZHAO

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

**BGD**

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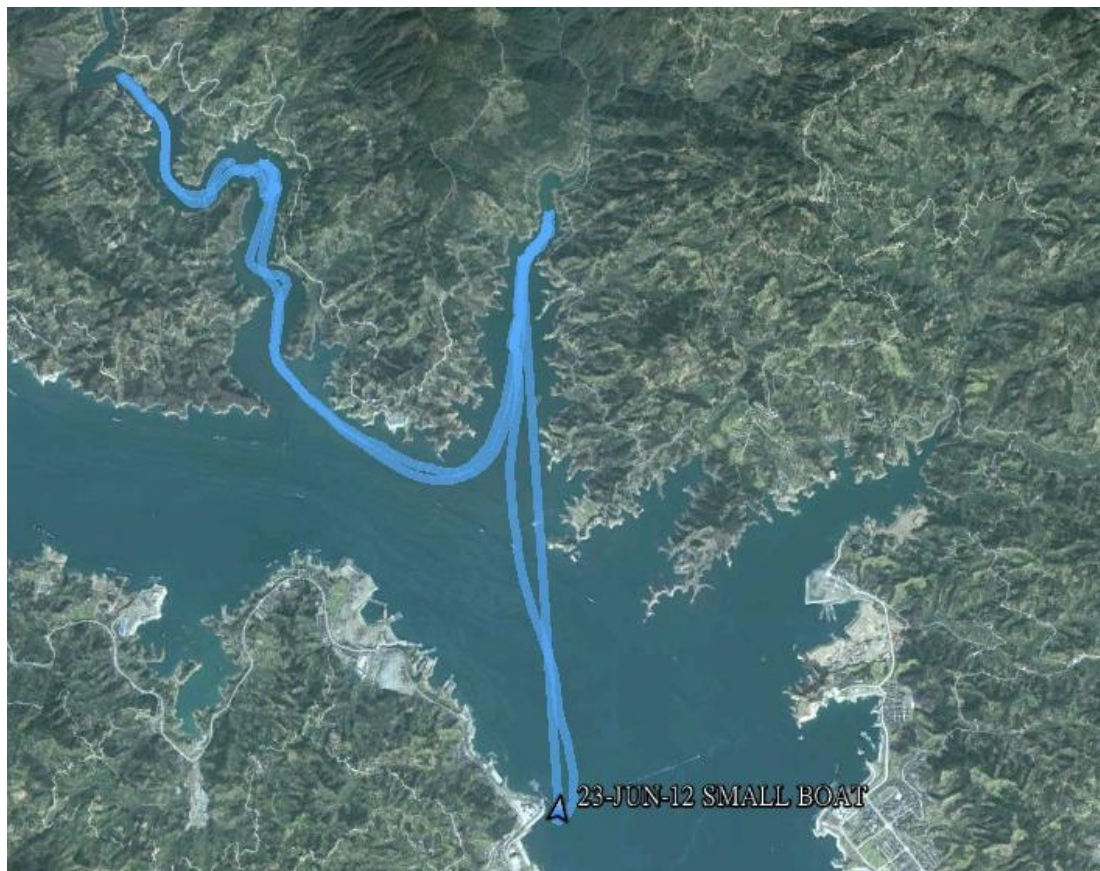
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**Fig. 1.** GPS waypoints of the ecosounder system

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