

Interactive comment on “Niche differentiation of ammonia and nitrite oxidizers along a salinity gradient from the Pearl River estuary to the South China Sea” by Lei Hou et al.

Anonymous Referee #2

Received and published: 28 June 2018

Hou et al. investigated the distribution of Ammonia and Nitrite oxidizers in a subtropical estuary of China by using the functional gene-based clone library and qPCR analyses as well as the determination of nitrification rates. The main conclusion of this work is that substrate affinity/preference of Ammonia and Nitrite oxidizers may play an important role in determining their distribution patterns in estuarine-ocean gradient. Some small comments are provided for improving this manuscript.

1. page 1, Line 2, and page 1, Line 15, I think "between" should be changed into "of"; 2. page 1, Line 15-18, Please add some background information related to niche differentiation of ammonia and nitrite oxidizers. This may facilitate readers to get a

C1

quick view of the current research status. 3. page 8, Line 9, could you provide a coverage information about this primer set you designed? 4. page 13, Line 6, reference citations? or based on your results? 5. page 16, Line 5, I think the group E of AOA belong to the typical Soil/Sediment cluster, while other groups you defined belong to the typical Water/Sediment cluster. Actually, the HAC and LAC clusters were defined on the basis of the later one, especially for the Marine cluster within the Water/Sediment cluster. If you want to define the members within Soil/Sediment cluster, like group E, please provide more supporting evidence/cited references. 6.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-189>, 2018.

C2