

## ***Interactive comment on “Diversity and distribution of Nitrogen Fixation Genes in the Oxygen Minimum Zones of the World Oceans” by Amal Jayakumar and Bess B. Ward***

**Anonymous Referee #1**

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The study of Jayakumar and Ward investigates the microbial nitrogen fixing community in three major oxygen minimum zones in the world's oceans. They took samples in the ETNP, ETSP and IO where they analysed OTUs using up-to-date DNA / RNA extraction and amplification methods. The specificity of the Q-PCR assays is described in detail and the construction of phylogenetic trees is fine. All methods are described extensively and the data set allows for the first time a solid comparison among sites. Moreover, the paper is clearly written and presents interesting conclusions such as low diversity in the Arabian Sea compared to other sites. The manuscript can be published as is.

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I would only appreciate some details like the station number and depths sampled in the material and methods section. Otherwise it is a timely and very valuable contribution to our understanding of the diversity of nitrogen fixing microbes in the ocean.

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