

## ***Interactive comment on “Seasonal occurrence of anoxygenic photosynthesis in Tillari and Selaulim reservoirs, Western India” by S. Kurian et al.***

**CA Abella (Referee)**

carles.abella@udg.edu

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The paper deals with a first account of the occurrence of GPB in a couple of Indian Reservoirs in summer. I think that in the actual draft several changes must be made before the final acceptance for publication. The paper seen technically correct except in some aspects related to sampling of the water column with no annual cycle measurements.

General Comments:

I think the authors exaggerate the importance and incidence of the paper taking in account the fact that no annual cycle has been performed or at least if as they say is sampled once a month since March 2010 L14 page 12156, were are the results? and

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in one case Selaulim Dam is only once sampled.

I wonder, that as frequently happens in stratified lakes and reservoirs, if is possible that Purple Photosynthetic Bacteria were also present in upper layers but not found due to the sampling method used at 5 m each. Thinner microbial layers or plates could easily be missed.

Don't confuse anaerobic microorganisms with anoxic conditions, don't mix up both concepts, don't say anaerobic hypolimnia (first phrase of Introduction) but anoxic hypolimnia.

In the discussion, eliminate speculative paragraphs. Check and review all the references because some are not stated at the end list for example: Narvenkar et al 2011.

Detailed comments:

Introduction Do not use the term "brown colored ones" better use "brown colored species"

Methodology The Pfennig medium should be cited with the reference not the German collection link only.

Results: L5 page 12160 I don't understand the meaning of shoaled? Explain L9 page 12160 you indicate the light irradiance at the surface and at the bottom but not the measurements at the layers of Phototrophic Bacteria. Please indicate and % in relation to the surface.

L14 page 12162 says: dominance of photosynthetic sulfur bacteria, change to: brown sulfur bacteria as indicated by the presence of BChl e and isorenieratene (check your spelling)

Discussion

Page 12163 line 5 you say: significant amount of sunlight (fig 3c). Indicate the exact % figure and depth. Page 12164 L 16 I think provided that you don't give any further

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explanation of the distribution of homologues you better integrate the results in the water column. Page. 12165 L 3 use *Cb. phaeobacteroides* Page 12165 L8 precise the exact measured value of low incident light levels similar to those encountered in the present study.

Discussion is too speculative in the paragraphs when comparisons with other water bodies are made.

Fig 1. In the large map of India subcontinent, Sri Lanka has disappeared, please correct the geographical detailed map.

Give a table with the results of the sampling of Selaulim Reservoir.

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