

Interactive comment on “Isotopic composition of nitrate and particulate organic matter in a pristine dam-reservoir of western India: Implications for biogeochemical processes” by Pratirupa Bardhan et al.

Anonymous Referee #1

Received and published: 17 August 2016

This paper reports some interesting results which demonstrates the potential of stable carbon and nitrogen isotopes to gain insight into biogeochemistry of Indian reservoirs where the monsoons play an important role in controlling vertical mixing and dynamics of carbon and nutrients. However, the quality of the text is not sufficient and the data interpretation needs improvements. There are some points that the author gave unclear information, which is showing as follows: 1- Abstract: Please explain the "POC", "PON", "SPOM" and "DIN". 2- Introduction: It is not clear that why did the authors carry out the study? What is the current research progress? 3- Site Description: The description of the study area was not clearly mentioned in this section, such as, land

C1

use, evaporation, water quality. 4- Sampling and field measurements: Please show the distribution of 51 samples in Figure (horizontal and longitudinal). 5- Figure 2, Figure 4 and Figure 5: The data are only from one sample or are the average values? 6- Figure3: Please show the depth of Epilimnion and Hypolimnion. 7- Isotopic and elemental composition of suspended particulate organic matter: The data of $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ should be show in table or figure. 7- 4.2.2 Denitrification, L10: why did you get 0.95 and 0.85? 8- I can't find the data from October, November, January, May, June, August and September. Why do you get the diagram to depict different biogeochemical processes taking place in the Tillari Reservoir over an annual cycle in Figure 5.

Interactive comment on Biogeosciences Discuss., doi:10.5194/bg-2016-270, 2016.

C2