

***Interactive comment on “Dynamic seasonal nitrogen cycling in response to anthropogenic N-loading in a tropical catchment, Athi–Galana–Sabaki River, Kenya” by T. R. Marwick et al.***

**Anonymous Referee #2**

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P8646, L14: Data of NO<sub>2</sub> is not presented. Is it negligible and is DIN assumed to be a sum of NH<sub>4</sub> and NO<sub>3</sub>?

P8646, L29: Is “5-7 60 mL” correct?

P8649: Data of conductivity shown in Fig. 2d is not described in the text at all.

P8449-8650, 8656: Total DIN is discussed without any figures or tables. Similar to the question in P8646, L14, results on DIN and N compositions should be presented in more detail.

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P8650, L11: The 2nd “WRST” should be “WSRT”.

P8650, L23: CH<sub>4</sub> in Fig. 4b should be touched.

P8651, L1-12: Comparison of d<sub>18</sub>O and POC:PN between three seasons are not shown in any figures or tables.

P8652, L19-23: Because data of river discharge was not available, loading of nitrogen or sediment cannot be directly discussed. Thus, the authors should avoid such an expression as “it is apparent that these seasonal DIN export observations agree with the suggestion of...”.

P8654, L19-22: The authors did not present any proof on “the dense coverage of the water surface by macrophytes during the dry season may inhibit the outgassing of N<sub>2</sub>O to the atmosphere”.

P8655, L11: “where NO<sub>3</sub>- is” should be “where delta NO<sub>3</sub>- is”.

P8660, L20: “Mayorga et al., 2010” is not listed in the references section.

P8674, Fig. 1(a): Please indicate Nairobi River, Athi River, Tsavo River, Galana River, etc. in the map so that readers can understand the distribution of important land uses.

P8674, Fig. 2: “Dissolved O<sub>2</sub>” and “pH” should be switched according to the order in the text.

P8682, Fig. 10(b): Please explain how to draw the non-linear line.

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