

Suggestions to authors

Title

As suggested by referee 1, the present title is probably not optimal relative to the content of the manuscript. I have seen your answer on this specific point but still suggest that the title could be rephrased to better suit the objective listed at the end of the introduction.

Abstract

L14 remove « in time and space »

L15 and 16 (see also L27): Abbreviations are generally not used in an abstract

L22 « do » should become « does »

L22 Remove the first « Still »

Introduction

P2, L11 I would suggest to modify the order temperature, sea level, acidification

P2, L24 Could be interesting to provide information on the time frequency as well. I know that this is provided later in the manuscript but is nevertheless missing at this level

P2 L30 Could be interesting to discuss of possible consequences associated with the reduction in resolution in the assessment of community composition as well

Materials and Methods

P5 L8 « was situated » should become « is situated » or remove « On the RW... »

P5 L23 freezing temperature ??

P5 L26 Unless I am wrong « RWS » has not been defined before

P5 L29 ammonium, calcium, magnesium

P6 Fluorescence Light Curve

P6 L29 Non-Photochemical Quenching

P8 L12 Reaction Centres. What is the significance of H in RCH ?

P9 L7 Light Scatter, Sideward Light Scatter

P9 L22-23 « having an angle of inclination of almost 1 ». Not clear. What do you mean : slope ?. If yes you should also consider the intercept (close to 0 ?)

P10 L2-5. May be too qualitative. Precision on the different thresholds could be provided

P10 L18 « scaled » do you mean centered and reduced as is the usual procedure for PCA ?

Results

General : Better care should be taken with utilization of the present and the preterite. Generally the preterite is used in results sections. The whole section should be checked and corrected for that.

General : The sampling took place between April and May. This is not enough to refer to seasonal changes. I thus recommend that « seasonal » be replaced by « between cruises ». This should be checked and corrected throughout the whole manuscript

P13 L19-24 Unless I am wrong, the ANCOVA has not been presented in the M&M section, which should be corrected. Moreover, readers may not be familiar with this procedure which is aiming at testing for significant differences between regression lines (i.e., in the present cases relationships observed during the 4 sampling months). This could be more clearly stated. Moreover, the wording of the results is not clear as it stands. I would like to remind that the procedure is a three step process :

1. Checking for the homogeneity of the residuals between the 4 models (if this condition is not met, then the procedure is not possible)
2. Comparing the slopes (if the slopes are different then the models are different and there is no need/sense to compare the intercepts)
3. Comparing the intercepts if the slopes are not different (if the intercepts are different then the regression models are different although their slopes are not)

I suggest that the paragraph could be rewritten based on this sequence.

P14 L2-3 Does the first sentence really belong to a results section ?

P14 L12 Remove « present as »

P14 L12-13 There is a problem of singular and plural between the two sentences

P16 L12 Usually sentences do not start with an abbreviation « E_k » should thus become « The E_k » as used afterward

P18-L17 I suggest to simplify the sentence to « Gross primary productivity ranged from XX in June to XX in the coastal zone during May »

P19 L14 « the identification »

P19 L15 « seen » should be replaced by « considered »

Discussion

General : I suggest to rearrange the discussion by stating at the beginning of each paragraph/section the results from the study that are discussed. This will help to reduce the confusion presently generated by the mixture of general statements and results from the study

General : For each paragraph/section, specific inputs from the study could/should be better put in evidence and their consequences stated more clearly

P22 L3 and 5 : There is a confusion here due to the use of singular (L3) and plural (L5) for method. Maybe one way of avoiding that would be to replace « method » by approach L3

P22 L9 « with and » ??

P22 L10 replace « in both the » by « during both »

P22 L24 « separate » should become « separated »

P23 L5-27 care should be taken to put the a of chlorophyll or chl in italics. Moreover, a clearer conclusion should emerge of this paragraph.

References

General : Please check this whole section for typing mistakes (e.g. p28 L31-35, p29 L2....)