

Interactive comment on “Technical Note: Artificial coral reef mesocosms for ocean acidification investigations” by J. Leblud et al.

J.-P. Gattuso (Editor)

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The referees of your paper were quite critical and highlighted serious deficiencies, many of which I already mentioned at the time of submission (copy below) but several of the later comments were not considered. I strongly recommend, if you plan to submit a revised version of the manuscript, that you carefully consider all comments (from referees and editor) in order to make a thorough and major revision, as well as provide a point-by-point reply to each comment. Note that a revised version would undergo a new round of review.

Jean-Pierre Gattuso

BG editor

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Comments made on the initial submission, 29 September 20154

Dear Author,

BG submissions can be rejected for only two reasons: out of scope and poor scientific quality. Your submission does not belong to any of these categories and could be published in Biogeosciences Discussions provided that the changes listed below are made. However, the manuscript does have deficiencies and some of my comments are quite critical. I suggest that you consider them carefully and ask yourself what novel technique or result your manuscript brings, compared to previous works. Please get back to me if you have any question. Note that this is not a formal review. The review process will start once the paper will be published in BGD.

Biogeosciences strongly promotes the full availability of the data sets reported in the papers that it publishes in order to facilitate future data comparison and compilation as well as meta-analysis. This can be achieved by uploading the data sets in an existing database and providing the link(s) in the paper. Alternatively, the data sets can be published, for free, alongside the paper as supplementary information. The ascii (or text) format is preferred for data and any format can be handled for movies, animations etc. . .

Thank you for considering BG to publish these results.

Sincerely,

Jean-Pierre Gattuso

- The title must start with: "Technical note: Artificial..."
- To me, the larges changes in total alkalinity are a flaw in your design. I suggest

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that you carefully think about it and be prepared to have a rough time in review.

- Another weakness is the comparison with field data. It is useless in my view considering the fact that, unless I am mistaken, Clavier et al. looked at sediments. In any case, what key information do you get from this comparison?
- Your definitions are very opaque, even for someone who is relatively familiar with mesocosms. First "artificial" is a useless qualifier because all mesocosms are artificial. Second, what does "(semi)-closed "cosms"" mean? Please rewrite.
- There is a large body of literature which used mesocosms
- 15: Doney et al (2009) is surely not the best reference to cite. Use the relevant chapter of IPCC 2013.
- 20: "species" rather than "ecosystemic"
- I find that the benefits of the system that you describe compared to previous coral mesocosms are not clear.
- You did not measure light intensity but irradiance
- 145: how were the plots made available on the Internet?
- How was O₂ measured?
- It is critical that you carefully read the manuscript and polish the style. Enrol a native English-speaker. Otherwise, the manuscript will go to copy-editing.

Interactive comment on Biogeosciences Discuss., 11, 15463, 2014.

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