

## BG-2017-255 Editor response to Revised Manuscript

I would appreciate it if the points below could be addressed in a further revision. I do not believe the changes are especially onerous.

### Reviewer #2

Line 216 The reviewer stated ‘ “Temperature had a positive effect on the GI of living maerl. Conversely, GI was significantly reduced under high pCO<sub>2</sub>...” The authors fail to mention that in the combined treatment, temperature alleviated the negative effect of pCO<sub>2</sub>. This is very important to the story. ‘, and the answer provided was as follows: A: The sentence has been revised due to the change in statistical design. (L. 218-219) “The GI of living maerl was not significantly influenced by increased temperature and pCO<sub>2</sub>, regardless of the season” – To my mind this response is not clear. Do you mean that with the new statistical design there were no significant effects of either temperature or CO<sub>2</sub>, or that the combined treatment was not significantly different from the control? If the latter, then please at least make the suggestion mentioned by the reviewer that the individual effects of CO<sub>2</sub> and temperature appeared to have cancelled each other out.

Line 238: The reviewer asks you to state that ‘temperature alone decreased epiphyte biomass in the summer’, however the re-wording that you have made does not make this point clearly (you state ‘while an interactive effect of temperature and pCO<sub>2</sub> was observed in the summer’). I would prefer you to make a clear statement about the direction of this interaction and how the variables concerned were affected. If it is not possible to simply state that elevated temperature led to decreased epiphyte biomass in summer then please state why not (perhaps not supported by the new stats).

Discussion. The reviewer asks you to state more clearly that the combined effects of temperature and CO<sub>2</sub> may be less marked than the individual effects of those variables. In part of your re-worded section you state ‘Under the predicted business-as-usual conditions, epiphyte overgrowth may exacerbate the negative impact of climate change on underlying coralline algae.’ Please check this, as I think you may mean ‘ameliorate’ instead of ‘exacerbate’ (opposite meanings).