Although the manuscript has been updated better, I still have a major comment for this manuscript. I will therefore suggest the major revision to your editor.

Major comments

1) The understanding of the seasonal variability in pH and Ω is important in this. I therefore recommend authors to calculate the seasonal pH and Ω sensitivities for T, S and DIC and ALK. The following reference are helpful for your revision. They use the Taylor expansions of pH and Ω derivatives and evaluate the T, S, DIC and Alk dependence of pH and Ω values.

DeJong et al. (2015):
Equation (2) of the following article is about the talyor expansion of omega
https://bg.copernicus.org/articles/12/6881/2015/bg-12-6881-2015.pdf
Hagens and Middleburg (2016):
Equation (2) of the following article is about the talyor expansion of pH
https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016GL071719

This calculation makes you discuss your results in detail qualitatively and the science quality for this paper improve much better.

Minor comments
Figures and Tables

1) You need subsequent numbers (a, b, c..) in Fig. 1, 3, 4,5, 6, 7, 8, 9, 10, 11, 12 and 13 and add the subsequence figure number after your appropriate sentences, which is helpful for the readers to identify which figure we should see correctly.
2) The sizes of the title and scale are too small in Figs. 3, 4, 5, 6, 8, 9, 10,11, 12, and 13.
3) Figure 1: The topographic map is too rough. You can use the model topographic data. In addition, it is better to add the sea topography, the name of the river location and bays, you mentioned in the manuscript (in Section 2.1). If you cannot use the model topographic data, JOCD website provides the 500m-meshed topographic data (https://www.jodc.go.jp/jodcweb/index_j.html).
4) There are too many figures of time-series. Some of them are repeated in this manuscript. For example, Fig. 3, 4, 5 and 6 show the same black bars indicating hourly precipitation. I recommend you combine some of them into one figure, especially for the observation figures. And if you do so, you can make the bigger figures, which becomes reader's friendly.
5) There are no x-axis titles in Fig. 3, 4, 5, 6, 10, 11, 12, 13, 14, 15.

6) The resolution of Figure 7 is low. It is difficult to identify the yellow character inside the figure.

7) Table 1 : Please add the html addresses for GEBCO, Japan Meteorological Agency website, Ministry of the environment website, respectively.

8) Table 3 : Are the days when omega in Hinase and Shizugawa in the simulation with RCP8.5 opposite (365 and 216)? Please check it.

10) The caption about DIC has been forgotten in Figure 5.

Chapter1

1) In Chapter1, author explains the mechanisms how global warming occurs and ocean uptake carbon in the second and third paragraphs. I recommend you add the equation such as (CO_2 + H_2O -> H_2CO_3 etc) after the appropriate sentences (2nd and 4th paragraphs).

2) 4th paragraph: Is the word "$CaCO_3$ saturation state (Ω) values" is general word?

3) 5th and 10th paragraph: "① However, it is not clear when and where these effects occur in the ocean. Therefore to assess the acidification impact on commercially ······ and evaluate the impacts on each species" "② Although the ecological effects of coastal warming, acidification····..clearer, when and how these effects will occur at oyster-farming sites are unknown." These are duplicated. I think you can delete one of them (①).

Section 2.1

1) The 4th paragraph can be deleted, judging from the contents and balance of the manuscript.

2) 5th paragraph: If you revise the figure, I recommend you to add the location name "Chikusa River", "Katakami Bay", "Genju bay", and "Hachiman River", respectively.

Section 2.4

1) 2nd paragraph: The model domain area can be shown in Figure 1 with observational sites.

2) 3rd paragraph: Please add number in km for "15 arc-second".

Section 2.4.1

1) Section 2.4.1 can be combined into Section 2.4, which results in deleting Section 2.4.1.

Section 2.5 and Table 2, 3, and 16

I couldn't understand how the end date of the spawning season of pacific oysters with RCP 8.5 senario is determined, judging from your sentence in Section 2.5 "Pacific oysters reach

sexual maturity when the accumulated water temperature reaches 600 degree based on a water temperature of 10 degree, and that at water temperatures of 20 degree or higher they spawn ocean and then mature and spawn again". Is it possible to find the end of the spawning day, although we cannot find the start day with RCP 8.5 senario in Sizugawa?

Section 3.1
1) Please correct typo "oin" in the 1st paragraph in Section 3.1.
2) 2nd paragraph can be combined into the 1st paragraph.
3) Please add figure numbers after your sentence, which makes more readers friendly.
4) 4th paragraphs: you write "a statistically significante relation between the rainfall and salinity was not idfentified" and "the relation between the salinity and rainfall was not statistically significant at any of the sites in Hinase and Shizugawa, and future studies are necessary". I think that the reason why you cannot find the significant relationship is because you compared the total records when you compared. Please try to analyze with some ingenuities. For example, comparison of the short-term data, individually. When we see the time-series of salinity and precession visually, we can see that they seemingly have some relationships.
5) 5th paragraph: Is there no figure we should see? If so, please add the sentence "not shown".

Section 3.2
1) 1st paragraph: Please add some description about the horizontal distributions more.

Section 4.2
2nd sentence "Our model results imply that the number of ⋯ in Hinase will increase from .. to 365 days with the RCP8.5 scenario in the 2090s". Is this sentence correct? Please check it.

Section 5.1 and 5.2
These sections are written about the mitigation and adaption. I think that it may not include them in the scientific paper. I recommend you delete these sections.