Dear author,

Thank you for your detailed reply to the referees. Before accepting your manuscript for publication, I would like you to consider and answer the following remarks from my side (the page and line numbers correspond to the second word document you sent me off line).

- Following the comment from Referee 2 on the large marine predator, you write that the forecasting system "will ultimately consist of 3 numerical models ..." as if it was not the case in the current study but you mention a separate paper to come. This seems contradictory to what is written in the manuscript "The model system consists of three models" as if it was the case in the current study - and you do not mention the paper to come. Please clarify.
- Following the comment from Referee 2 on the importance of "iron supply from river run off vs iron supply from sediments", a sentence summarizing your "Author's response 4" should be added in the text.
- Author's response 7: from your reply, I understand that only MODIS is used; but from the text, I understand that both MODIS and MERIS are used. Please clarify.
- On Figure 7, is r strictly equal to 0?
- p.8, L4: I do not understand what "respectively build using analytical values" means. Please clarify.
- p.1, L24: despite what you write in your reply, the word "degradation" is still used. This is fine with me but some explanations should be added on what "without degradation in space and time" means.
- p.8, 1st parag.: It would be better to move the sentence "Initial and open boundary conditions are summarized in Table 1." at the beginning of the paragraph.
- p.18, L21-22: To follow Referee 2's comment and your reply, I suggest to change "The strengths of the simulation are reminded below and weaknesses are discussed as follow: coastal ocean, cross-shore gradient and open ocean." for "In the following paragraphs, the strengths of the simulation are first reviewed and weaknesses are then discussed."

Also for better readability, I suggest the following minor changes :

- p.3, L10: «leading to 80% of the reefs at risk» for «leading to 80% of the reefs being at risk»
- p.3, L27: "The regional configuration of ocean dynamics" for "The regional ocean dynamics"
- p.3, L30-31: "displays similar patterns to satellite estimates" for "displays patterns similar to satellite estimates"
- p.4, L9-10: please remove "(Section 5)" as it appears earlier in the sentence
- p.5, L17: "of waters which" for "of waters, which"
- p.6, L2-3: "effects of each climate mode are more difficult to analyse as both influence ITF transport" for "effects of ENSO and IOD climate modes are more difficult to discriminate as they both influence ITF transport"
- p.6, L17: "has especially been developed" for "has been developed especially"
- p.7, L17: "asselin filter" for "Asselin filter"
- p.7, L19 & 22: "ie." for "i.e."
- p.8, L4: "or they have to be estimated from satellite data" for "or are estimated from satellite data"
- Please use full name or symbols consistently. E.g. on p.8 L13-15, you use "iron" and not "Fe", but later in the sentence you use the symbol "Si"
- p.8, L15: "Yearly river mean discharges" for "Yearly means of river discharges"
- p.9, L11: "we are using years 2010 to 2014" for "we use years 2010 to 2014"
- p.18, L16: "A suit of numerical models has been coupled " for "A suite of numerical models were coupled" (a "suit" c'est un costume !)

- p.18, L18: "Here we access the skill" for "Here we assess the skill"
- p.18, L20: "was launched in January 2007" for "was launched starting in January 2007" (if not, it sounds as if the run really started 9 years ago)
- p.19, L.4: "... Indian part). These anomalies suggest ..." for "... Indian part); this suggests ..." (because "anomalies" in its original sense sounds like something is wrong)
- p.19, L.8: "deepened in a future study" for "further investigated"
- p.19, L.9: ".Mean chlorophyll-a ..." for "However, mean chlorophyll-a ..." to mark the start of the section describing weaknesses.
- p.19, L.11: "are diffusive" for "are too diffusive".
- p.19, L.15: "The slight disequilibrium introduced ..." for "The slight disequilibrium explicitly introduced ..."
- p.19, L.16: "in line with observations" for "and to make it comparable with observations."
- p.19, L.20: "will be needed" for "is needed"
- p.19, L.20: "availability of data. Most of the" for "availability of data as most of the"
- p.19, L.20: please remove the comma in "too much chlorophyll-a, and NPP on the shelves"
- p. 20, L.11: "However, it results in an overestimation of the vertical gradient of nutrients, and the nutricline is considerably strengthened" for "However, it would result in an overestimation of the vertical gradient of nutrients, and the nutricline would be considerably strengthened"
- p. 20, L.13: "Improving ..." for "Hence improving ..."
- p. 20, L.15: "relies at first order on the model physics." for "first requires improving the model physics."
- p. 20, L.23: "initialized and forced by the same PSY3 forecasting system." for "initialized and forced coherently, on the base of the PSY3 forecasting system."