#### Dear editor:

We appreciate your efforts in reviewing our manuscript and providing us with constructive comments. We have revised our paper accordingly, and the point-to-point responses to your comments are as follows.

#### **Comments to the author:**

**Dear Authors** 

Thank-you for your revised manuscript responding to my comments. I am asking for "Technical corrections" according to my detailed comments below. You might also look to see if you can remove some statements which are repeated, leaving those that are in the best place. Then you should enter your manuscript directly into the Editorial system (I do not need to see it again). It will be copy-edited (for use of English etc.) and you should check that the final version still has your intended meaning. Thank-you for publishing in Ocean Science.

Yours sincerely

John Huthnance (editor)

#### **Detailed comments**

1)Line 198. Omit "two consecutive" (the years are not really consecutive).

#### **Response:**

Thanks. We delete "two consecutive" in line 198.

2)Line 230. Omit the punctuation "and"

## **Response:**

Thanks. We delete "and" in line 229.

3)Lines 243-244. I think the units of discharge should be m<sup>3</sup>/s.

#### **Response:**

We changed "m/s<sup>2</sup>" into "m<sup>3</sup>/s" in line 244.

4)Table 2. "Bathymetries" -> "Bathymetry" (twice) and please avoid splitting words in headings.

# **Response:**

We changed "bathymetries" into "bathymetry" in line 250.

5)Lines 346, 380, 398, 419, 530, 541, 592, 601, 835, 842 (figures 3-10, A.1, A.2 captions dates) ". . 11th . ."

#### **Response:**

Thanks. We changed "11st" into "11th" in lines 346, 377, 398, 420, 532, 543, 596, 606, 844, and 851.

## 6)Line 376. Add "tidally-averaged"

## **Response:**

We have added "tidally-averaged" in line 376.

7) Figures 5, 6 captions. I think you still need to say that there are more model grid points than arrows (what fraction in horizontal?)

## **Response:**

Thanks. We have rechecked the grid resolution, and added "There are more model grid points than arrows (horizontal resolution: 68m-180m)." in lines 402-403, and "There are more model grid points than arrows (horizontal resolution: 64m-316m)." in lines 424-425.

8)Lines 457, 458. "the positive" -> "a positive"

## **Response:**

Thanks. We changed "the positive" into "a positive" in lines 459, 460.

9)Lines 531-532, 593, 602 (figures 7, 9, 10 captions); maybe ". . (the 25h average rate of change . ."

#### **Response:**

Thanks. We changed "the time rate of" into "the 25h average rate of" in lines 534, 597 and 607.

10)Line 560. "will be further discussed"; please say whether in the following section(s) or in future.

#### **Response:**

Thanks. We deleted "The effects of these changes on estuarine circulation will be further discussed." In lines 563-564.

11)Lines 585-586. Better ". . narrowing, the greater increase in 2010 was mostly caused by the depth change. . ."?

#### **Response:**

Thanks. We changed "with the increase in 2010 was greater, which" into "the greater increase in 2010" in lines 589-590.

12)Lines 622-624. Better ". . diffusion term: the area with a large positive value . . disappeared and the magnitude . . at the eastern end of the section. . "?

#### **Response:**

Thanks. We changed "term, and the area with a large positive value at the bottom of the East Shoal disappeared, along with the magnitude of the negative value decreased greatly at the eastern most of the section." into "term: the area with a large positive value disappeared at the bottom of the East Shoal and the magnitude of the negative value decreased greatly at the eastern end of the section." In lines 628-630.

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13)Line 631. "which" -> "as".
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## **Response:**

Thanks. We changed "which" into "as" in line 637.

14)Line 632. "the highest" -> "fastest".

#### **Response:**

Thanks. We changed "the highest" into "fastest" in line 638.

15)Line 636. "the largest" -> "fastest".

#### **Response:**

Thanks. We changed "the largest" into "fastest" in line 642.

16)Line 650. Do you mean "However"? This implies a contrast between what you say before and after. In this case you refer to "longitudinal advection" both before and after; this looks like duplication, not contrast. Please check that you say what you intend.

#### **Response:**

Thanks for the comment. We have revised the text behind Fig.8 (lines 550-559) and this part to make it clear. Now it reads "However, as shown in Fig.8, not only the longitudinal advection but also the lateral advection plays the important role in generating the estuarine circulation in the HE." In lines 657-660.

17)Lines 734-736. I think you may want this sentence to be "If reclamation is less frequent than in the last century, and channel dredging continues, then circulation in the HE will keep increasing as the water depth increases, and thus a positive feedback exists." Please check.

## **Response:**

Yes. We have modified the text as you suggested in lines 742-745.

18)Lines 748-749. "change in lateral circulation". Is the "change" a decrease? Please be explicit.

#### **Response:**

Thanks. We changed "change" into "a decrease" in line 757.

19)Line 778. Maybe just ". . conditions. However, our focus"

#### **Response:**

Thanks. We deleted "But as we mentioned" in line 787.

20)Lines 779-780. ".. circulation; we leave the effect .." [You need not make the paper

# longer by saying that it is lengthy!]

# Response:

Thank you for your reminder. We deleted "and the paper has already been much lengthy," in line 789.