

The handling editor thanks the authors for their submission of Chapter 2 “Sea Level Rise in Europe: observations and projections” and for their revisions of the paper based on feedback from two anonymous reviewers and three community comments. The authors have addressed the reviewers comments satisfactorily either by following the reviewers suggestions or convincingly arguing why they decided not to.

Based on my review of the revised manuscript, I recommend that this manuscript requires minor corrections before finalization. The corrections I suggest are mainly related to improving clarity and detailed below.

### **1 Introduction**

L81: icesheets -> ice sheets

### **2 Summary of previous assessments**

L133: I think the two references can be in the same parentheses.

### **3 Regional observations**

Figure 3, caption: the caption is referring to panel a and b but as far as I can see, the panels are not labelled. I suggest changing to left and right. Also, there is no “top right”.

Figure 4, caption: you refer to Figure 3b but there is no “b” in Figure 3.

L301: sea level dynamics ARE highly...

Figure 5: Referring to a comment by Rev2: You do not refer to the two periods shown in Figure 5. I would ask you to explain them in the caption and add a sentence in the text to highlight the changing decadal trends.

L378: time -> temporal

L380: I think it would be useful to explain what you mean by “relative measure of VLM”. Relative to what?

L433: Calafat et al. (2022) determined ... (remove “has”)

### **Section 4 Drivers of sea level rise and extremes**

I would suggest distinguishing more between past and present drivers and projected drivers. This section does a little bit of both. Section 4.1 covers the past and projections (ice sheets only), section 4.2 mostly the observational period and section 4.3 seems to be period-independent.

Section 4.1 could be shortened by moving the part on projections to section 5, particularly the last paragraph on ice shelf collapse.

L463: Fig. 2.8b → Figure 8b

L464: make about → account for

L469-470: suggest rewriting to: The role of atmospheric dynamics is also uncertain.

L482: Figure 8c

L487: MICI has not yet been defined.

L521: I think you can remove “which are the changes in the amount of water stored on land”

L529: replace “is” with “are”

L535: icesheets -> ice sheets

Figure 9, legend: what is GMOM?

### **Section 5 Projections of sea level rise...**

L656-657: “Figure 11 regional SLR projections...” the first part of this sentence reads strange.

Figure 11, caption: you refer to a, b, ... e, f but I don't see the numbering in the panels.

L702: Is there an “and” missing between the references?

L704: ABUMIP? It is in the list of acronyms but only mentioned once. Consider writing it out.

L738: replace “certain” with “selected return heights”? (If this is what you mean here) – I think the concept of amplification factor could benefit from an example. In L745-746 you mention the “amplification factor of the frequency of ESLs” as opposed to “probability of ESLs” in L738. While I think I understand, it might be confusing to some readers.

Figure 12 caption: can you give a brief description of what the amplification factor means? I agree with Rev2 that this could be useful.

Figure 13: Add information about which scenario is used (low probability?). And I guess the changes are associated with storm surges, waves AND MSL changes?

## **Section 6 Key developments per region**

The newly added introduction to this section is a great improvement and serves as a central thread to the subsections. Well done. I only have a few suggestions that hopefully improve clarity.

- The basin-averaged sea level for reconstructions and projections is formed over the coloured areas shown in Figure 14, correct? That is, they are not averages over coastal sea level as shown in Figure 15-19b and c?
- Following a comment by Rev2, I think it is worth mentioning explicitly that the reconstruction still contains GRD effects due to present day barostatic mass changes, thus justifying calling the RSLR instead of geocentric SLR.
- Is it correct that GIA is removed in the reconstruction but not in the projections shown in Figures 15-19a? If so, I would ask the authors to consider removing GIA from the projections, too, for consistency or, alternatively, show the reconstruction with GIA. Either way, please clearly state for both, reconstructions and projections, whether they are shown with or without GIA.
- Table 3: What about the North Sea? GIA has a relatively large impact in its northeastern part along the Norwegian coast.

Figure 15-19, captions: since the subpanels are labelled a, b and c you can use that in the caption as well (instead of top, lower left, lower right). As a consequence, I would also ask the authors to refer to e.g. Figure 15a,b,c when appropriate.

### **6.1 Atlantic Ocean**

In general: north-eastern -> northeastern

L911: Figure 15b.

L928: Refer to Figure 15c somewhere in this paragraph? Figure 15 is only mentioned very generally in the end. I suggest you move this last sentence of the paragraph higher up!

L966: One parenthesis too many in the reference.

L999: “ones of the world regions” → two regions

L1004: e.g., -> e.g.,

### **6.2 North Sea**

L1046: should this be “relative” SL?

L1049: Several...

L1054: Refer to Figure 16b somewhere in this sentence.

L1084: raise → change or affect? Variability or negative trends may also lower the baseline.

L1142: Remove comma after Lobeto et al. for consistency with subsequent references.

### **6.4 Mediterranean Sea and Black Sea**

L1313: Figure 18, top panel → Figure 18a

### **6.5 Baltic Sea**

Figure 19a: are you sure you are plotting the reconstructed sea level WITHOUT GIA? To me, it seems that the trend is negative, certainly for the entire period but also for 1950-2014 when it should be positive according to Table 3 (Baltic no-GIA)

## **7 Conclusion**

L1566: south-eastern -> southeastern (for consistency with northeastern used higher up in this section)