

Public justification (visible to the public if the article is accepted and published):

Dear Lisa Degenhardt and co-authors,

Thank you for submitting the revised version addressing the reviewers' comments.

As noted by the first reviewer in the previous round, having read the new version I still think Figs 4 and A6 need better explanation in the text. As these are key figures of the paper, the message emerging from them should be more clearly outlined. There are also quite a few sentences that can be improved throughout the text.

[LD] Dear Shira Raveh-Rubin,

Many thanks for spending again valuable time on the editorial process of our manuscript. We are thankful for the already made comments and suggestions of the two reviewers and yourself and try to reply in the following as detailed as possible to the additional advice provided by you. We identified several places in the text where we think we could improve the quality of writing. We started with the abstract and made some clarifying language changes. Further changes are marked in the track-changes version of the revised manuscript.

I suggest below some specific changes to improve the readability of the text and figures. Note the line numbers refer to the last author tracked changes version.

[LD] Many thanks for this- much appreciated. We comment point-by-point in our reply.

Fig. 4 and accompanying text: The readability of the figure and its results should be enhanced.

I suggest that before describing the results (in the paragraph in lines 265-271), better guiding of the reader through the figure would be helpful, along these lines

“i.e., red colours in the left column of Fig. 4 mean that... while in the right column the interpretations of red colours would be... areas with different colours in the left/right columns for the same variable imply that...”.

[LD] Many thanks for this. Yes, we added a respective explanation at the end of the mentioned paragraph. We chose this to be placed at the end of this paragraph, as this paragraph firstly describes the Fig. 4 in general and the new details of the figure interpretation would then nicely allow the reader to move on to the description of the results, which are presented in the direct following section.

More specifically, it is unclear from the caption if the difference in skill shown is “well-predicted minus poorly-predicted” forecasts for both approaches (columns), please be specific.

[LD] Many thanks, for this comment. This information has now been added to the figure caption.

The parenthesis and notion “respectively” in line 266 are unclear (I assume it is not successful predictions for the factor-skill view and unsuccessful predictions for the process-based view).

[LD] Many thanks for highlighting this. We double checked and think the sentence is in principle correct. Nevertheless, we increased clarity by re-phrasing to: “The differences in the respective forecast skill of the storm frequency for these two approaches are shown in Fig.4. The left column provides the differences in skill for the factor-based view, the right column the difference in forecast skill for the process-based view.”

Also, the dots and triangles are indistinguishable in print (also in Fig. A6), please enhance this in the figures.

[LD] Many thanks for making us aware of this. We added colouring to distinguish dots and triangles better: triangles are now given in green, dots in black colour. We also increased the size of the dots and triangles.

Line 269: should “absolute difference” be replaced by “correlation”?

[LD] Many thanks for highlighting this ambiguity. The phrase “absolute differences” is right here. The categorisation whether a season is poor or well predicted is based on the absolute differences of the individual factor. The region mean is used as time series and each season individually subtrahend (ERA5 minus GloSea5 ensemble mean). This is described in the method section roughly L139ff (tracked version).

Table 1: please clarify the direction of MSLP gradient (or if the maximal magnitude of MSLP gradient is considered at each grid point), and why the u,v components are mentioned for calculating theta_e (and mixing ratios are not)

[LD] The MSLP-gradient is given as its absolute value, thus without a direction, we added this to the table. You are right with Theta_e, this is a typo that probably occurred by copying cells from other factors. The Theta_e is calculated with the specific humidity and temperature. Thank you very much for making us aware of this.

Lines 12-13: merge these two sentences in the abstract “These factors are skillfully predicted in storm-relevant regions. And this skill leads to increased forecast skill of winter windstorms over Europe”.

[LD] Done, please cf. further language changes to the abstract as mentioned above.

Line 28: delete “about”

[LD] We replaced this with “ca.”, as the tracking is based on the 98th percentile of the local wind speed and the existing of a spatial coherent cluster of a minimum size of this exceedance and with a minimum duration. Thus, only if all exceedances of the local 98th percentile are occurring in large enough clusters it would be exactly 2%. In reality the value may thus be a bit lower, depending on how many small-scale clusters with only short duration occur.

Line 52, 66: change to “upper-tropospheric”

[LD] Done

Line 75: delete “on”

[LD] Done

Line 128: add “the” before “original”

[LD] Done

Line 158: delete “is”

[LD] Done

Line 201: Here you changed “downstream” to “upstream”, which is the opposite of the reply to the reviewer’s question. Please clarify.

[LD] Many thanks for pointing this out. As reviewer 2 commented this should read “upstream”, as the dipole pattern is in the upstream direction of the general westerly flow in this region. Thus, as the dipole pattern is west of the UK, “upstream” should be correct.

Lines 209-210: delete repetitive “over the North Atlantic”.

[LD] Done

Line 211: Seems better not to start a new paragraph here.

[LD] Done

Fig. 2 caption: add “histograms” before “below”. Change “scales” to “scaled”

[LD] Done

Line 252-3: this sentence is not very clear, please rephrase and place it after the next sentence to help with readability.

[LD] We newly structured this paragraph and shortened the sentences for more clarity.

Line 259/262: is centre of action = centre of activity? If so, choose one and be consistent throughout.

[LD] Done

Line 283: change the first “the” -> “that”

[LD] Done

Line 284: one -> ones

[LD] Done

Line 291: “result in more convection”: this is not shown directly so either delete this statement or frame it as a possible explanation.

[LD] We have framed this sentence more as an explanation to make it clearer that the convection part is not shown.

Fig. A2 caption: bad -> badly

[LD] [Done](#)

Fig. A4: change from red/blue to yellow lines here as in Fig. 2.

[LD] [Done](#)

Check for misplaced capital letters throughout the manuscript (e.g., MSLP Gradient, Divergence and others)

[LD] [Done](#)

Additional private note (visible to authors and reviewers only):

Dear reviewers, thank you for the second round of constructive suggestions!

Shira