Dear Editor

Many thanks for the constructive and positive comments on our perspective paper (copied below).

To respond to these, we have added a new paragraph into the paper at **lines 193- 206**, further detailing that a number of highly relevant perspective papers have appeared over recent years, touching on areas common to our perspective piece. We encourage the readers to read our piece in the light of these other perspectives and emphasize our piece aims to discuss priorities across the entire chain of activities that deliver scientific knowledge into the international and national policy arenas.

In addition, as we very much agree with the need for a balanced approach to future model development, as outlined in https://egusphere.copernicus.org/preprints/2024/egusphere-2024-20/ and recommended by the reviewer, we have strengthened our statements around the need for increased collaboration between physics/process-based modelling and hybrid/Machine Learning approaches at **lines 93 to 96 and lines 683 to 686**.

We hope that these changes are sufficient to allow the paper to be accepted for publication.

Best wishes

Colin Jones (Prof)

....

Reviewer comments:

One remaining recommendation is to include a short mention/discussion of other relevant opinion pieces. The fact that this opinion is one of several that have recently appeared should be recognized in the introduction; a short discussion of major similarities could be included towards the end of the paper. Examples of relevant opinions include:
https://egusphere.copernicus.org/preprints/2024/egusphere-2024-20/
https://doi.org/10.1029/2023EF004187
Discussing common threads, especially if they are coming from different parts of the community, would add weight to the recommendations included in this paper.

Editors comment:

Additional private note (visible to authors and reviewers only):
Please address Reviewer 1's suggestions, in particular, reference to recent relevant work.