

Comments on Emerging Climate Research Symposium: Considerations for the Delta Region

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This symposium is central to ensure the future of Delta region is planned based on the most reliable information. In particular, panel discussion question 8 is critical to inform the remaining stated questions in this symposium and merits a symposium by itself. Because of climate change intensification, several feedbacks in General Circulation Models (GCM) are underestimated or unaccounted for, consistent with the climate change intensification described by IPCC over the years. Thus, the most recent climate scenarios may also underestimate the future level of change derived in downscaled GCM. (see references). The effectiveness of climate change adaptation depends on the most reliable anticipation of the range of expected variables and their interactions (e.g., sea level, temperature, humidity, wet bulb temperature, water temperature, precipitation, wind speed).

References

[Missing eddy feedback may explain weak signal-to-noise ratios in climate predictions.](https://www.nature.com/articles/s41612-022-00280-4)

<https://www.nature.com/articles/s41612-022-00280-4>

[The Effect of Physically Based Ice Radiative Processes on Greenland Ice Sheet Albedo and Surface Mass Balance in E3SM.](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023JD040241) <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2023JD040241>

[Missing Climate Feedbacks in Fire Models: Limitations and Uncertainties in Fuel Loadings and the Role of Decomposition in Fine Fuel Accumulation](https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2021MS002818)

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2021MS002818>

[Climate Models Underestimate Dynamic Cloud Feedbacks in the Tropics.](https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2023GL104573)

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2023GL104573>

[The missing risks of climate change.](https://www.nature.com/articles/s41586-022-05243-6) <https://www.nature.com/articles/s41586-022-05243-6>

[What Are Climate Models Missing?](https://www.science.org/doi/10.1126/science.1237554) <https://www.science.org/doi/10.1126/science.1237554>