

Masunaga R., T. Miyakawa, T. Kawasaki and H. Yashiro, 2023: Flux Adjustment on Seasonal-Scale Sea Surface Temperature Drift in NICOCO. *J. Meteor. Soc. Japan*, **101**, 175-189.

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Plain Language Summary: The present study showed that the sea-surface temperature drift in 40-day integrations with the NICAM – COCO coupled model was successfully suppressed by a simple flux adjustment method designed to suppress seasonal-scale sea-surface temperature drift. Nevertheless, the air–sea interaction processes were likely to be undistorted by flux adjustment. A high-resolution coupled model with appropriate flux adjustment would substantially improve the prediction skill of a numerical model on a timescale of several weeks.

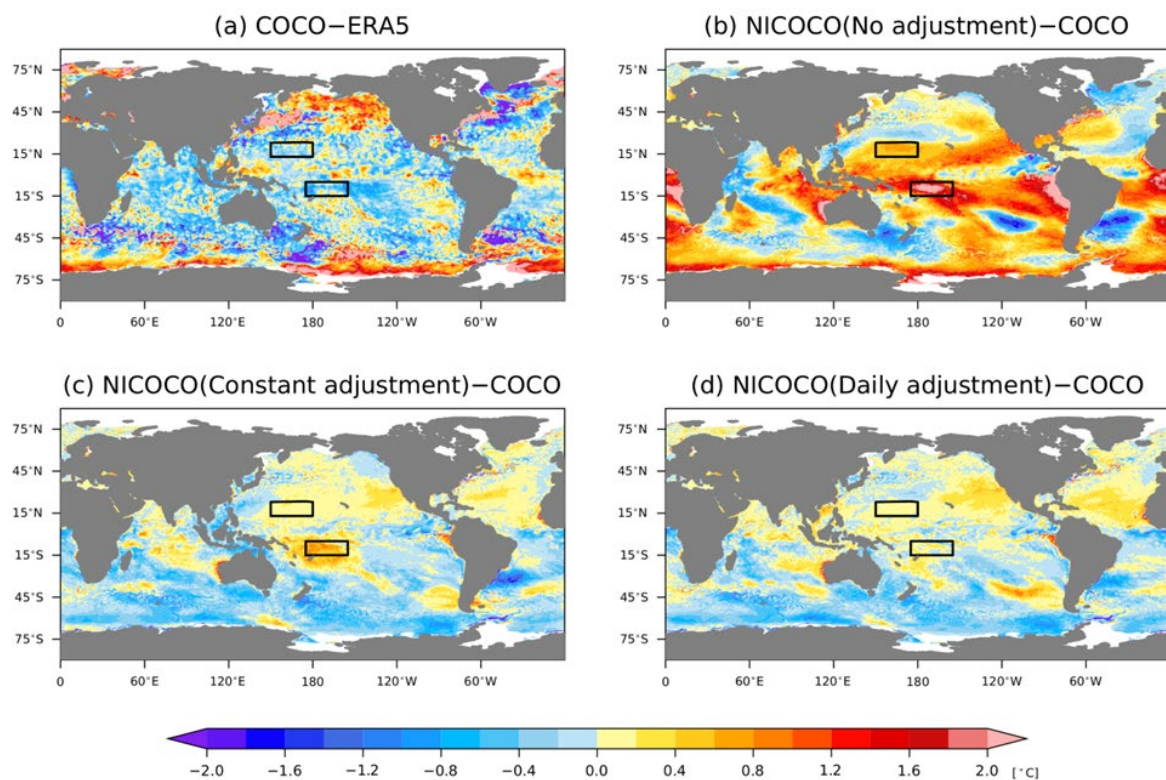


Figure 1. (a) A map of bias in daily-mean SST based on the uncoupled COCO relative to ERA5 on February 13, 2010 (°C; shaded) and the corresponding SST biases relative to the uncoupled COCO based on (b) NICOCO with no flux adjustment, (c) NICOCO with constant flux adjustment, and (d) NICOCO with daily-updated flux adjustment.

- We tested a simple flux adjustment method to suppress seasonal sea surface temperature drift using a high-resolution coupled model.
- A simple flux adjustment suppressed the sea surface temperature drift while representing appropriate air–sea interaction processes.
- A high-resolution coupled model with appropriate flux adjustment can substantially improve the sub-seasonal to seasonal-scale predictions.