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## Prediction Challenges from Errors in Tropical Pacific Sea Surface Temperature Trends

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Initialized, monthly mean predictions of the tropical Pacific Ocean are made against the backdrop of a warming climate, and it is unclear to what extent these predictions are impacted by trends. Here, we analyze the forecast models that comprise the North American Multi-Model Ensemble (NMME) and uncover significant linear trend errors that have consequences for the tropical Pacific basin and ENSO variability. All models show positive trend errors over the eastern equatorial Pacific over the 1982-2020 hindcast and real-time period. These positive trend errors interact with the mean bias of each respective model, reducing, over time, the bias of models that are too cold and increasing the bias of models that are too warm. These trend errors lead to a tropical Pacific that is too warm and too wet over the basin, and is significantly correlated with an increase in El Niño false alarms. Finally, we explore the consequences of these tropical Pacific Ocean trend errors on predictions of global precipitation anomalies.