Near Real-time Evaluation of Operational Oceanographic Predictions: Over a Decade of Intercomparison by Global Ocean Forecasting Centers

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Abstract

Near real-time evaluations of operational predictions are required to ensure consistency and quality of forecasts. When possible, intercomparisons of such predictions against common observational datasets allows a further understanding of multi-system spread and uncertainty in predictions, and sheds light on quality of both numerical prediction and observational datasets. For the physical ocean, an intercomparison of operational analyses and forecasts was put in place in 2012 under the auspices of the OceanPredict Intercomparison and Validation Task Team. With over a decade of experience demonstrating the evolution of the accuracy of operational oceanographic predictions, this valuable dataset provides a community resource to underpin additional studies such as the benchmarking of deep-learning neural-network emulators. Here we highlight the lessons learned and challenges encountered in this activity and describe how the system is evolving from a research effort into an operational verification activity. We also describe two additional datasets that have been added, namely, sea ice concentration and 15-m currents.