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Long - Term validation of forecasting results based on in situ ground measurements for contributing to the cal/val of the Mediterranean Monitoring and Forecasting Centre (Med-MFC)

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The current study aims at the validation of the European Center of Medium-Range Weather Forecasts (ECMWF) data for a period of two years using in situ ground observations. The main goal is the development of a calibration/validation system to be used by the Mediterranean Monitoring and Forecasting Centre (Med-MFC) using in situ ground observations, remote sensing data and numerical model data.Five well-established statistical indexes were selected and implemented for validating the ECMWF data used by the Med-MFC: (a) Bias, (b) RMSE, (c) the Nash-Sutcliffe Model Efficiency Coefficient, (d) the Correlation Coefficient and (e) the Precipitation Capture Rate.
The current implementation lengthens the validation period to two years, thus further minimizing the statistical uncertainty of previous efforts and making the validated results more statistically significant. The aforementioned indexes provide a good correlation estimate between the sea-surface in-situ measurements and the modeled results and can be of great use for further numerical model calibration purposes.

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