Supplementary Materials: A Preliminary Impact Study of Wind on Assimilation and Forecast Systems into the One Dimensional Fog Forecasting Model COBEL-ISBA over Morocco

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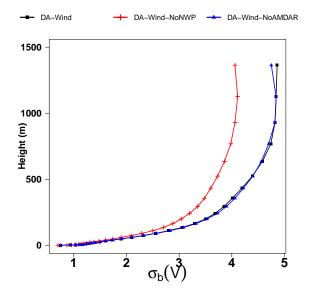


Figure S1. Background error standard deviation for meridional wind $(m.s^{-1})$ for DA-Wind, DA-WindNoNWP and DA-WindNoAMDAR experiments.

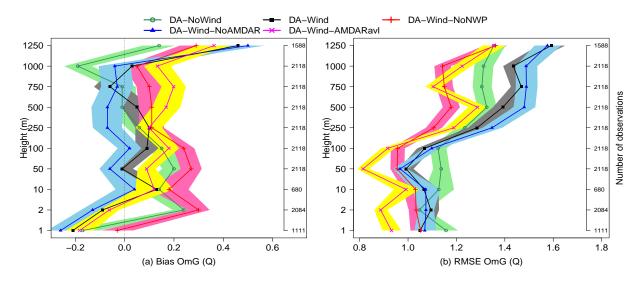


Figure S2. Background departure (OmG) statistics (bias, left; rmse, right) for specific humidity, averaged over the winter period (Dec. 15 - Feb. 16). The number of observations used is shown on the right. The shaded areas represent the confidence intervals at 95%.

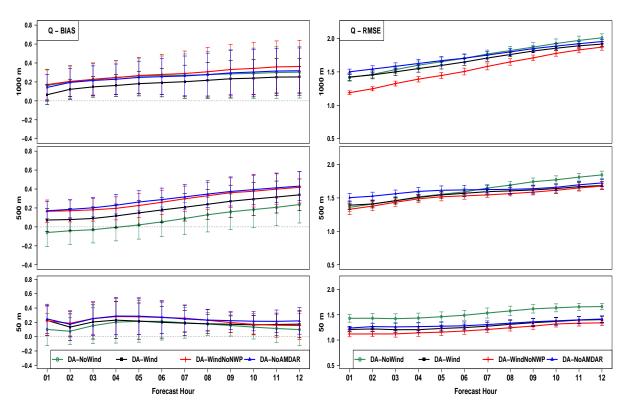


Figure S3. Time series of statistics (BIAS, left; RMSE, right) as function of forecast hours (up to 12h) for specific humidity at the following vertical levels : 50m, 500m and 1000m. The error bars represent the confidence intervals at 95%.

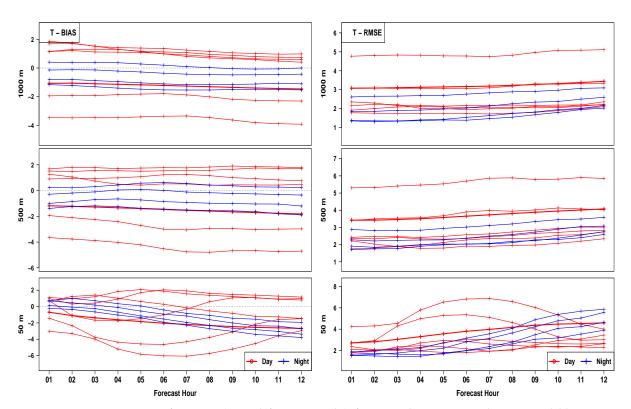


Figure S4. Time series of statistics (BIAS, left; RMSE, right), for runs where AMDAR data are available, as function of forecast hours (up to 12h) for temperature at the following vertical levels : 50m, 500m and 1000m. The runs of day are in red and those of the night are in blue.