EMD-WRF Europe+ Mesoscale Data Set
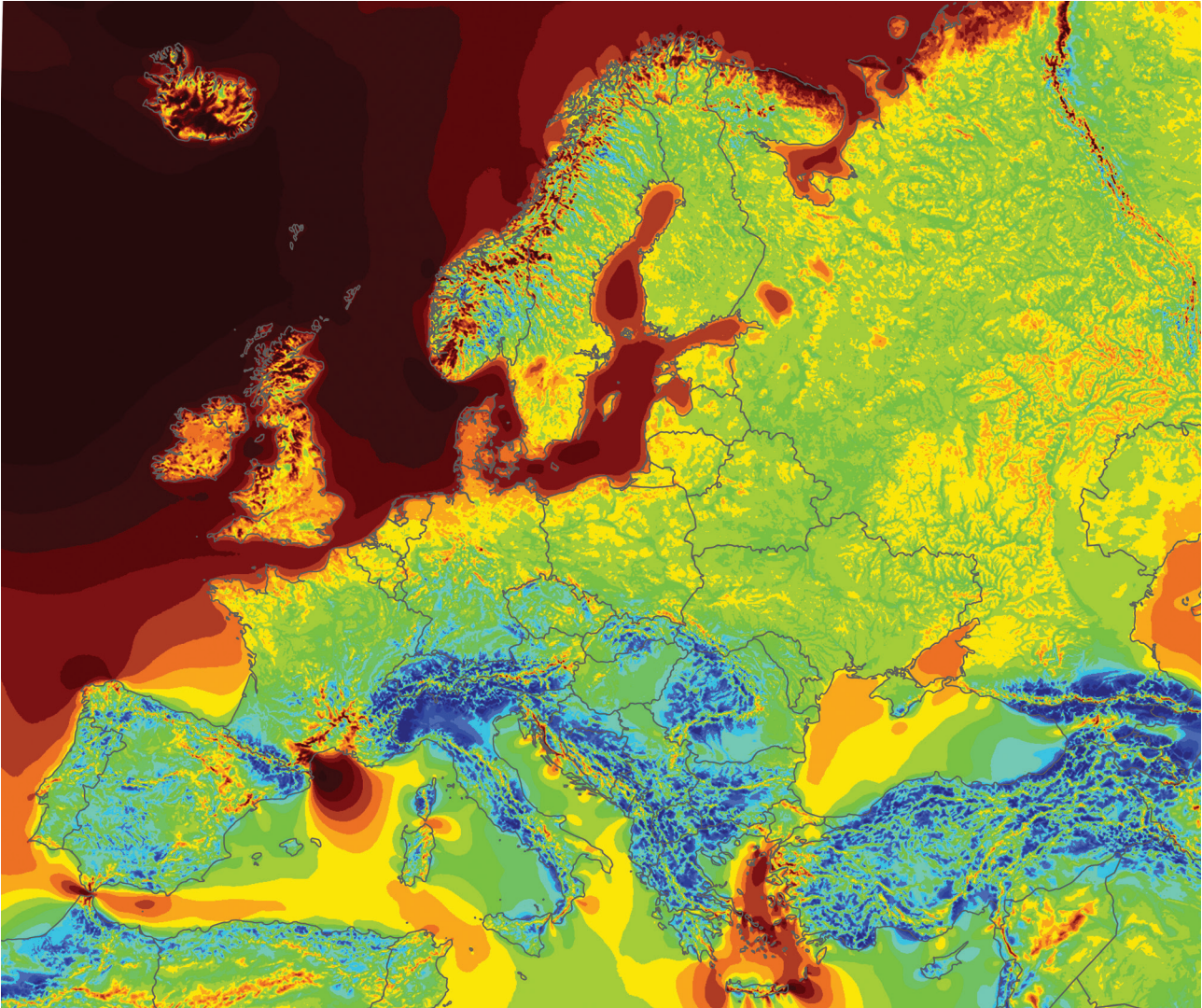
The best value mesoscale data set on the market exclusive to windPRO users.
Instant access to 2.5 million up-to date time series via flat-rate subscription.

The 'EMD-WRF Europe+' subscription gives you instant access to 2.5 million continuously updated onshore and offshore mesoscale time series in the above domain showing annual mean wind speed.

The WRF mesoscale model is run in an optimized configuration at a high spatial resolution of 3km to produce hourly time series. ERA5 data from ECMWF is the model's global boundary data set.

Direct access to time series via windPRO's user-friendly on-line data service **- no delivery time!**
Spatial visualization of the full domain is included via windprospecting.com accessed from windPRO.

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Price:	**2,000€ (first subscription) and 800€ (additional subscriptions in company).**
	Contact: sales@emd.dk or www.emd.dk
Spatial coverage:	Entire Europe until the Ural Mountains and the whole of Turkey.
Temporal coverage:	10+ years at release (July 2019), extended to 20+ years during 2019.
	Data is updated monthly with a delay defined by ERA5´s availability.
Heights and signals:	10, 25, 50, 75, 100, 150, 200, 300, 400, 500, 750, 1000 and 4000 meters
	Speed, Dir., Temp., Hum., Pres., TI, MOL, Heatflux, Irradiation + many more

Validation – The Best Data Set Around?

Performance of EMD-WRF Europe+ versus ERA5, MERRA2 and NEWA:

Probability curves for R² based on 302 quality masts from wind power projects.
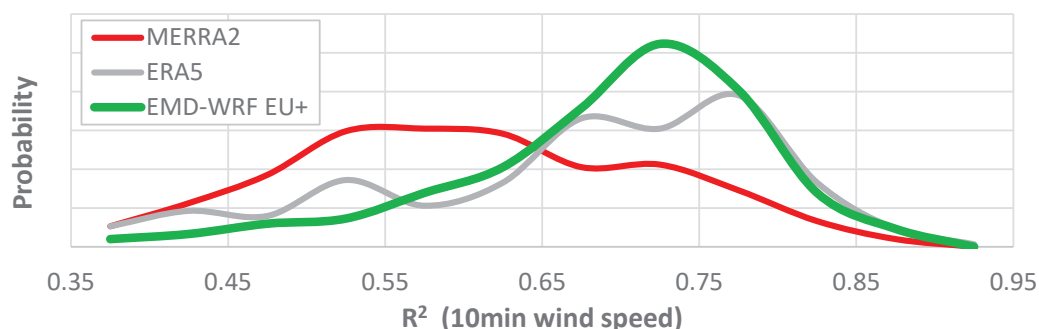
Mean R² versus averaging period (302 masts).
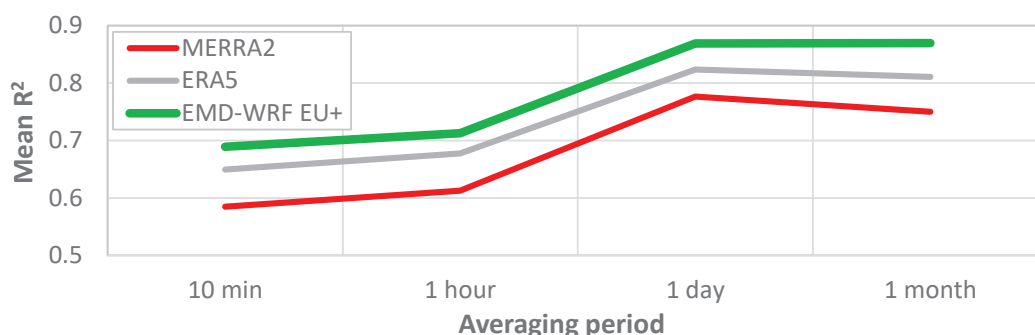
Performance statistics based on 302 masts (best, worst).

302 masts	MERRA2	ERA5	EMD-WRF EU+
Wind speed (R²) * mean(R²) ± stdev(R²)	0.59 ± 0.14	0.65 ± 0.15	**0.69 ± 0.10**
Wind direction (MAE) * mean(MAE) ± std(MAE)	45° ± 17°	41° ± 18°	**38° ± 16°**
Wind distribution (CV bias) * mean(CV bias) ± std(CV bias)	-7% ± 10%	-2% ± 9%	**0% ± 7%**

Performance statistics including NEWA based on 11 masts (best, worst).

11 masts	MERRA2	ERA5	EMD-WRF EU+	NEWA
Wind speed (R²) * mean(R²) ± stdev(R²)	0.65 ± 0.11	0.69 ± 0.13	**0.72 ± 0.08**	0.63 ± 0.07
Wind direction (MAE) * mean(MAE) ± std(MAE)	40° ± 12°	36° ± 11°	**34° ± 9°**	43° ± 8°
Wind distribution (CV bias) * mean(CV bias) ± std(CV bias)	-7% ± 5%	-3% ± 3%	**0% ± 6%**	4% ± 3%

*) R² = Coefficient of Determination,   MAE = Mean Absolute Error,   CV = Coefficient of Variation

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