## **Important:**

## ERA5 data from Sep-Nov 2021 will differ from ERA5T - with Sep 2021 updated now!

Dear windPRO online-data user

EMCWF support has notified us about an issue with the preliminary ERA5T data from a 3-month period ranging from Sep-Nov 2021. This means that – for the first time since the introduction of ERA5 and ERA5T in late 2019 – that the final, validated ERA5 data will differ from the preliminary ERA5T data.

The issue is caused by the assimilation of anomalous snow depths over Central Asia – and this assimilation is thought mainly to affect surface parameters - read more in the notification from ECMWF, <u>here</u>. As final ERA5 data from Sep 2021 has now become available, EMD has made an analysis to determine if also the Sep 2021 wind speeds differ, and if so, how much and at which geographical locations? A memo with this analysis is available <u>here</u> and it clearly shows, that wind speeds from ERA5T and ERA5 also do differ with a magnitude that is quite different from region to region. As a monthly average, the difference is quite small (typically below 0.1 m/s), but for individual timestamps (hourly values) the difference can be as large as 10-15 m/s.

EMD will handle this issue by replacing ERA5T data with ERA5 data when it becomes available. For windPRO users, ERA5T data for Sep 2021 has been updated with ERA5 data on 2021-12-07. For users who have already downloaded and used ERA5T data from Sep-Nov 2021 - or intend to use ERA5T data for Oct-Nov 2021, we recommend the following actions:

- Use proper caution when using the preliminary ERA5T data from Sep-Nov 2021, especially if your analysis relies on individual sample values (hourly values)
- Update the preliminary ERA5T data with the final, validated ERA5 data when it becomes available (2-3 months after current date).
- Given updated ERA5 data: Redo any calculations for your project, site or application and analyse any differences between results obtained from the preliminary ERA5T data and the final ERA5 data
- Take action in the event that results for your project/site/application is affected.

## Read more:

- EMD memo on "2021 September Wind Speed Differences from the ERA5T-ERA5 Anomalous Snow Depth Assimilation Issue" <a href="https://example.com/here/here/here/">here</a>
- See an animation of the differences in the 100m winds over central Europe here.
- Follow the status at the ECMWF homepage here
- WindPRO wiki on ERA5T here.

Best regards, The windPRO online data team <a href="mailto:support@emd.dk">support@emd.dk</a>

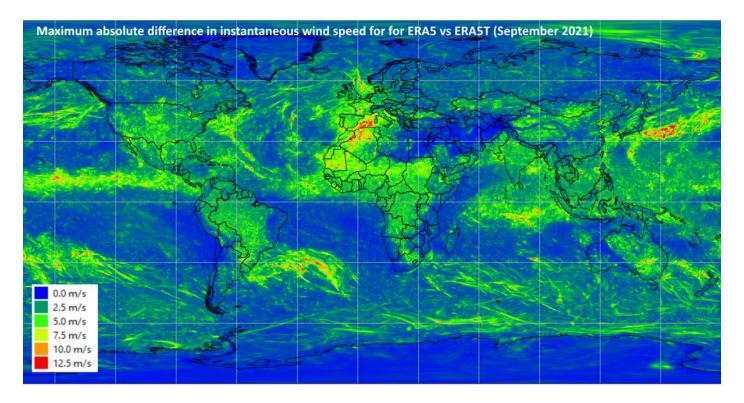


Figure: Maximum absolute difference in instantaneous wind speed (individual time step) for ERA5 vx ERA5T for Sep 2021.