

OUTLOOK

17 January, 2020

with

Sub-seasonal forecasts

for the weeks of 20 - 26 January, 27 January - 2 February, 3 - 9 February, 10 - 16 February

> & Seasonal forecasts

for the months of February, March, April 2020

The beta version of S2S4E Decision Support Tool (DST) is an operational climate service that integrates, for the first time, sub-seasonal to seasonal climate predictions with renewable energy production and electricity demand.

Find examples of how the DST forecasts can inform the energy sector in the

Case Studies Factsheets

available at:

www.S2S4E.eu



PREDICTED TERCILE

AboveNormal

Below

The forecast information provided is probabilistic. Instead of one single model realisation, several realisations are considered (ensemble members), providing a set of several possible outcomes (48 for NCEP CFSv2 and 51 for ECMWF SEAS5). This information is summarised and transmitted in the form of probabilities. Three equiprobable categories (terciles) have been used: below normal, normal and above normal. Each one of these tercile categories contains one third (33.3%) of the events over the reference period. The forecasted probability corresponds to the percentage of ensemble members predicting below normal, normal or above normal conditions, based on the past climatology.

PROBABILITY RANGE

50% to 100%	As seen in the DST, regions where the predicted probability of the most likely tercile equals or in higher than 50% are represented with a bigger symbol, to highlight areas of larger probability. User can customise the exact percentage of predicted probability (from 0 to 100%) in the DST.	
• 34% to 49%		
EXTREMES		
🛕 Max (p90)	To provide information about the probability of having very high or very low climate conditions, the	
V Min (p10)	DST displays the percentage of members under the 10th percentile and the percentage of member exceeding the 90th percentile. These 10th and 90th percentiles have been computed from th climatological period. Extreme events show with the triangle symbol when the probability of a	
SKILL SCORES	extreme event occurring is over 25%	
	In the mans presented in this outlook, only regions with positive skill are shown. Skill scores below (

In the maps presented in this outlook, only regions with positive skill are shown. Skill scores below 0 are defined as unskilful, those equal to 0 are equal to the climatology forecast, and anything above 0 is an improvement upon climatology, up to 1, which indicates a "perfect" forecast. In the DST these values have been expressed as percentages, where a skill of 1 would equal to 100% skill. FairRPSS for terciles and Brier Skill Scores for extremes are used.



If you have queries or feedback you can contact us at:



The DST outlooks are released once per month and available at:



Subscribe to the outlooks and register to the DST at:

s2s4e@bsc.es

s2s4e.eu/climate-services/outlooks

www.s2s4e.eu/dst



This project has received funding from the Horizon 2020 programme under grant agreement 1776787. The content of this report reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

This outlook presents forecasts available on the DST on the 17th of January for the coming four weeks and next three months. These S2S4E forecasts were made by postprocessing the climate prediction systems: NCEP CFSv2 (sub-seasonal) and ECMWF SEAS 5 (seasonal), following the methodology described in the **advanced help** of the DST.



Probability terms Enhanced : 34% - 49% High: 50% - 70%: Very High : Greater than 70%



Temperature forecasts

Below

• 34% to 49%

SUB-SEASONAL

Prediction system used: NCEP CFSv2

Maps show areas where skill (fRPSS) > 0



High probability of above normal temperatures in the north of Europe with risk of extremes in the Nordic countries. High probability of below normal temperatures in Spain, France and Italy.

February 2020



27 January - 2 February

High probability of above normal temperatures in the UK, Denmark, Austria, Slovakia, Poland and Belarus (skill ~ 20%).

March 2020

A AA AAA

High probability of above normal temperatures in Denmark, Belarus, Estonia and Lithuania (skill 5-10%).

3 - 9 February

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10 - 16 February

Vin (p10)



High probability of above normal temperatures in Denmark. Belarus and Ukraine (skill 5-10%).

SEASONAL

Prediction system used: ECMWF SEAS5

Maps show areas where skill (fRPSS) > 0

..... 300 •••••• An

High probability of above normal temperatures in parts of the Nordic countries.





High probability of above normal temperatures in central, northern and southeastern Europe, with risk of extremes (skill above 10%).

Browse the global forecasts in the DST:

www.S2S4E.eu/dst

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Probability terms Enhanced : 34% - 49% High: 50% - 70%: Very High : Greater than 70%

Wind speed forecasts

Predicted tercile	Probability range	Extremes
Above	50% to 100%	🛕 Max (p90)
Normal		
Below	• 34% to 49%	💎 Min (p10)

SUB-SEASONAL

Prediction system used: NCEP CFSv2

Maps show areas where s kill (fR P S S) > 0



High probability of above normal wind speeds in the Scandinavian countries, around the Baltic Sea and Spain. High probability of below normal wind speed in central Europe.

27 January - 2 February



High probability of above normal wind speeds around the North Sea and Belarus (skill below 20%).

March 2020

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3 - 9 February

High probability of above normal wind speeds around the North Sea and north of Italy (skill below 5%).

April 2020

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10 - 16 February



High probability of above normal wind speeds around the North Sea (skill below 5%) with risk of extremes.

SEASONAL

Prediction system used: ECMWF SEAS5

Maps show areas where s kill (fR P S S) > 0



Enhanced probability of above normal winds in northern Europe.

Enhanced probability of below normal winds in parts of central Europe (skills below 5%).

High probability of above normal winds in the North Sea.

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SUB-SEASONAL

Maps show areas where s kill (fR P S S) > 0

Prediction system

used: NCEP CFSv2

Probability terms Enhanced : 34% - 49% High: 50% - 70%:

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Very High : Greater than 70%

20 - 26 January

Precipitation forecasts

27 January - 2 February

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Enhanced probability of above normal precipitation in northern Europe (skill ~5%). High probability of below normal precipitation in Spain, Italy and Turkey.

March 2020

3 - 9 February

Enhanced probability of above normal precipitation in Scandinavian countries (high for Norway).

April 2020

10 - 16 February



Generally enhanced probability of above normal precipitation in northern Europe and enhanced probability of below normal precipitation in southern Europe (skill below 5%).

SEASONAL

Prediction system used: ECMWF SEAS5

Maps show areas where skill(fRPSS) > 0



Generally high probability of below normal

precipitation, except in the Scandinavian

countries, where high probability of above

normal precipitation is forecasted (very high

for Norway) (skill ~30 %).

High probability of below normal precipitation in parts of Sweden.



High probability of below normal precipitation in parts of the Balkans.

Em

Forecasts show no clear signals; probabilities similar to climatology.

Browse the global forecasts in the DST:

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Probability terms Enhanced : 34% - 49% High: 50% - 70%: Very High : Greater than 70%

20 - 26 January



Solar radiation forecasts



SUB-SEASONAL

Prediction system used: NCEP CFSv2

Maps show areas where s kill (fR P S S) > 0



Enhanced probability of above normal radiation in France, the Alpine region and the Balkans (skill 30-40%).

27 January - 2 February

.... <u>.....</u> Δ.Δ.

Enhanced probability of below normal radiation in northern Europe (high probability in Sweden).

March 2020

····· _____X . A.... ······<u>A</u>·····

3 - 9 February

Forecasts show no clear signals; probabilities similar to climatology.

10 - 16 February



Forecasts show no clear signals; probabilities similar to climatology.

SEASONAL

Prediction system used: ECMWF SEAS5

Maps show areas where s kill (fR P S S) > 0

February 2020 7 🛛 0.0000 • •• •• /^{**} ··· ··· 🔬 🗇 ···· ••• 🔺 ••• ••• 1.0 W -----• •• •• •• J • 6.... •• ••• •• •••• North Sea •••• . 🔍 😁 North Sea •••• • •... **High** probability of below normal radiation in Forecasts show no clear signals; probabilities countries bordering the North Sea (skill above similar to climatology. 5%). 10%).

April 2020



High probability of above normal radiation in parts of Germany and France (skill around

Browse the global forecasts in the DST:

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