

OUTLOOK

17 September, 2019

with

Sub-seasonal forecasts

for the weeks of
16-22 September, 23-29 September,
30 Sept-6 October, 7- 13 October

&

Seasonal forecasts

for the months of
October, November and December

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

OUTLOOK USER GUIDE

PREDICTED TERCILE

- Above
- Normal
- 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%
- 34% to 49%

As seen in the DST, regions where the predicted probability of the most likely tercile equals or is higher than 50% are represented with a bigger symbol, to highlight areas of larger probability. Users can customise the exact percentage of predicted probability (from 0 to 100%) in the DST.

EXTREMES

- ▲ Max (p90)
- ▼ Min (p10)

To provide information about the probability of having very high or very low climate conditions, the DST displays the percentage of members under the 10th percentile and the percentage of members exceeding the 90th percentile. These 10th and 90th percentiles have been computed from the climatological period. Extreme events show with the triangle symbol when the probability of an extreme event occurring is over 25%

SKILL SCORES

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.

This outlook presents forecasts available on the DST on the 17th of September 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 SEAS5 (seasonal), following the methodology described in the **advanced help** of the DST.



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

s2s4e@bsc.es



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

s2s4e.eu/climate-services/outlooks



Subscribe to the outlooks and register to the DST at:

www.s2s4e.eu/dst



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Temperature forecasts

Predicted tercile

- Above
- Normal
- Below

Probability range

- 50% to 100%
- 34% to 49%

Extremes

- ▲ Max (p90)
- ▼ Min (p10)

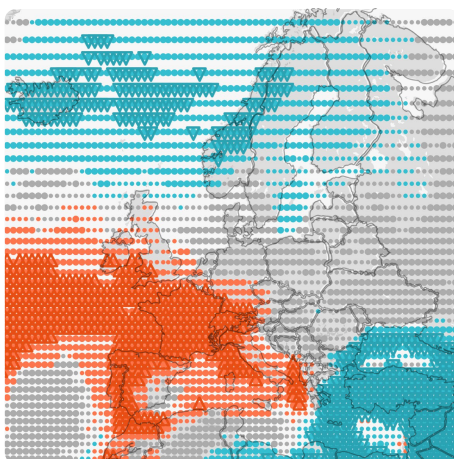
Legend

SUB-SEASONAL

Prediction system used:
NCEP CFSv2

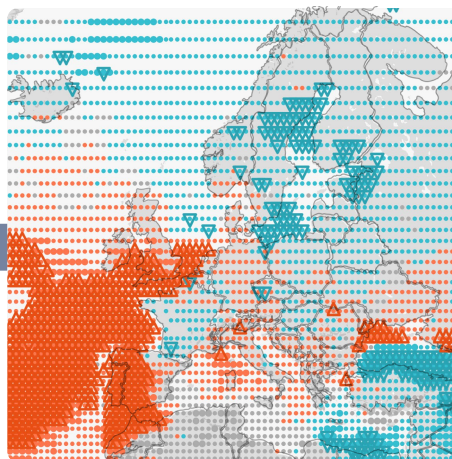
Maps show areas where
skill (RPSS) > 0

16-22 September



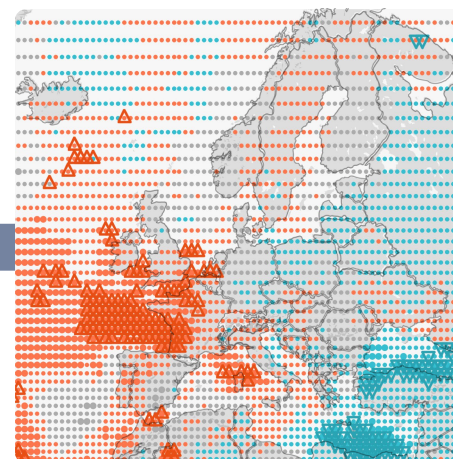
Very high probability of **above normal** temperatures, with risk of **extremes** in France, Belgium, Switzerland, north of Italy and west of the Iberian Peninsula.

23-29 September



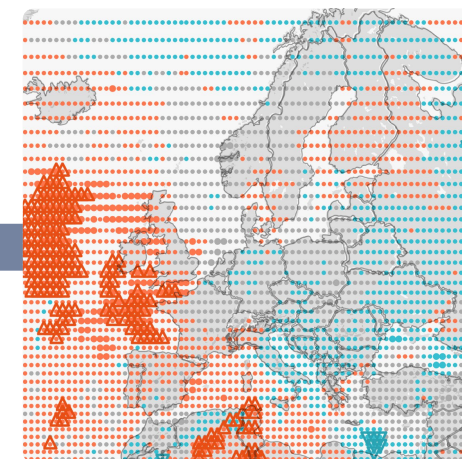
High probability of **above normal** temperatures in the Iberian Peninsula and **enhanced** probability in Germany. **Enhanced** probability of **below normal** temperatures in northern and eastern Europe.

30 September - 6 October



High probability of **above normal** temperatures in the west of France, south of UK, and north of Iberia.

7- 13 October



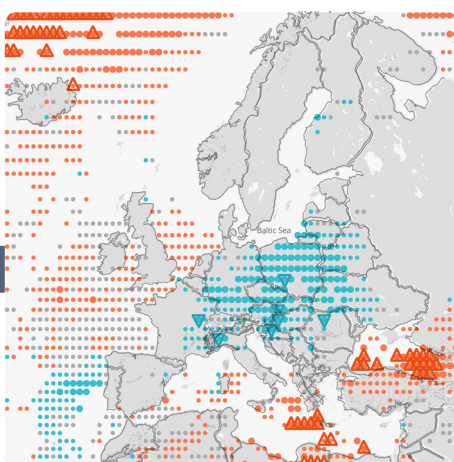
High probability of **above normal** temperatures in the Atlantic region, affecting mainly the UK.

SEASONAL

Prediction system used:
ECMWF SEAS5

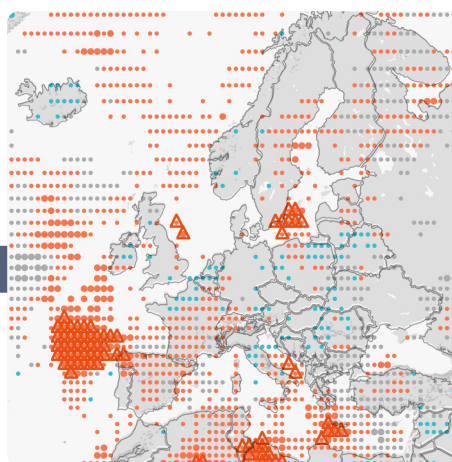
Maps show areas where
skill (RPSS) > 0

October 2019



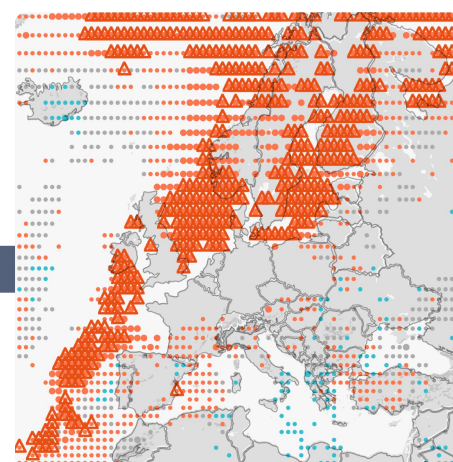
High probability of **below normal** temperatures in central and eastern Europe (skill above 5% in this region).

November 2019



Enhanced probability of **above normal** temperatures in the Iberian Peninsula, southern France and southern Italy. Risk of **extremes** in northwest of Spain.

December 2019



Very high probability of **above normal** temperatures and risk of **extremes** in countries bordering North and Baltic seas and the Atlantic.

Browse the global
forecasts in the DST:

www.S2S4E.eu/dst



Wind speed forecasts

Predicted tercile

- Above
- Normal
- Below

Probability range

- 50% to 100%
- 34% to 49%

Extremes

- ▲ Max (p90)
- ▼ Min (p10)

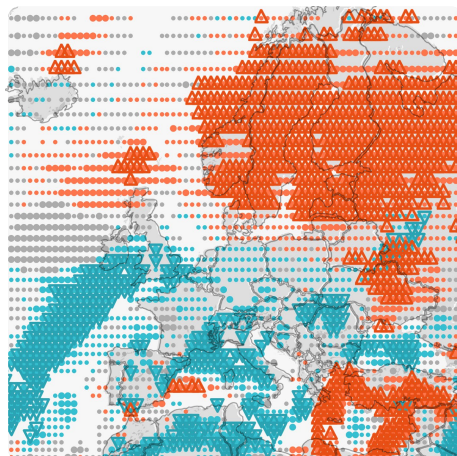
Legend

SUB-SEASONAL

Prediction system used:
NCEP CFSv2

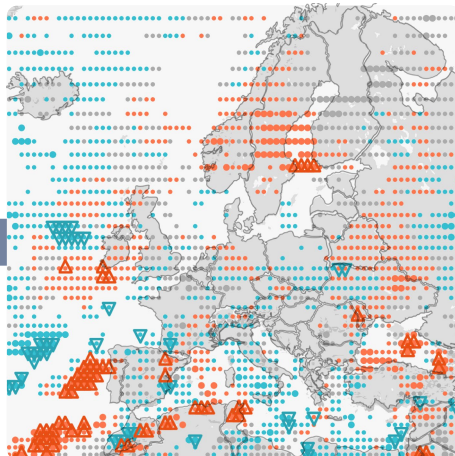
Maps show areas where
skill (FRPSS) > 0

16-22 September



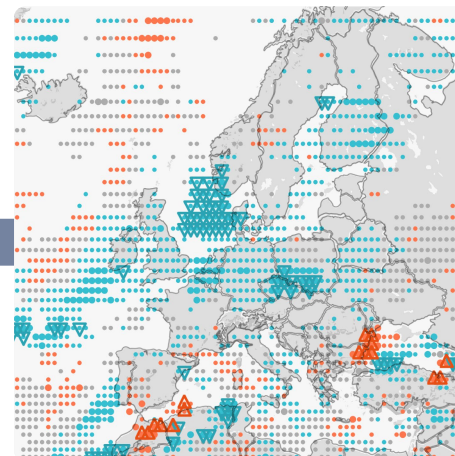
Enhanced probability of **below normal** wind conditions in central Europe, **high** probability of **above normal** wind in Scandinavian countries.

23-29 September



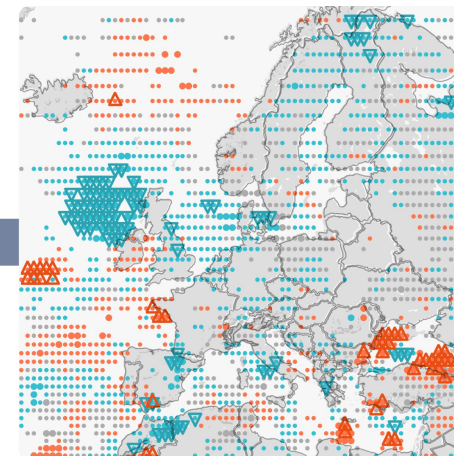
Enhanced probabilities of **below normal** wind speed in Spain and France. **Enhanced** probabilities of **above normal** wind speed in northern Germany and **very high** probability in areas of Scandinavia.

30 September - 6 October



Enhanced probability of **below normal** wind speed in the north of France, Benelux countries, Germany and Czech Republic and Poland.

7- 13 October



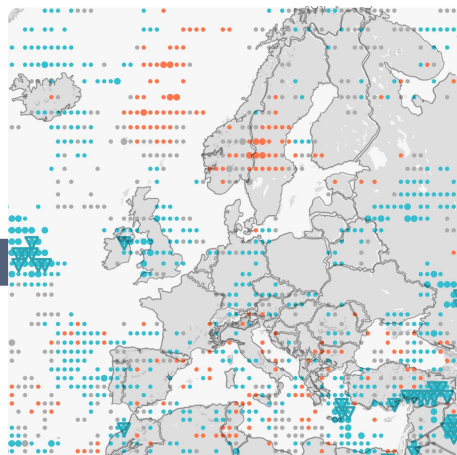
Enhanced probability of **below normal** wind speed in the North Sea region with skill above 20%.

SEASONAL

Prediction system used:
ECMWF SEAS5

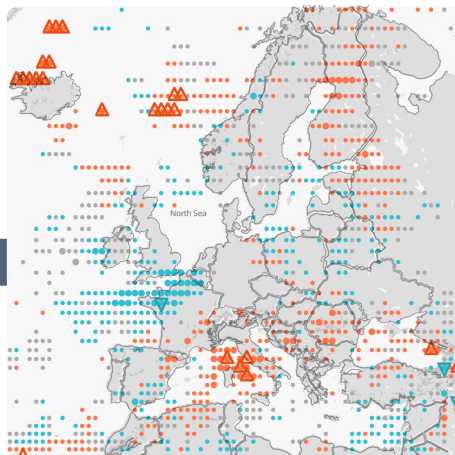
Maps show areas where
skill (FRPSS) > 0

October 2019



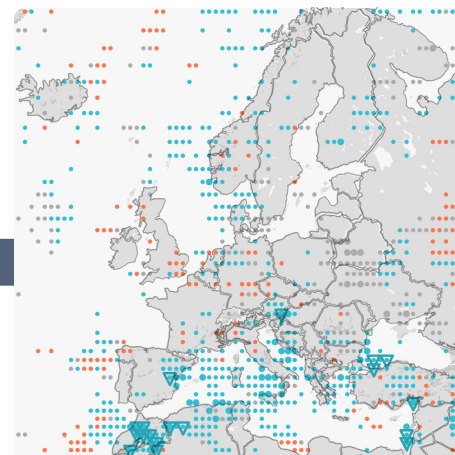
High probability of **below normal** wind speeds in the British Isles.

November 2019



High probability of **below normal** winds south of British Isles and northwest of France (skill around 10%)

December 2019



Enhanced probability of **below normal** winds in the Mediterranean region.

Browse the global
forecasts in the DST:

www.S2S4E.eu/dst



Precipitation forecasts

Predicted tercile

- Above
- Normal
- Below

Probability range

- 50% to 100%
- 34% to 49%

Extremes

- ▲ Max (p90)
- ▼ Min (p10)

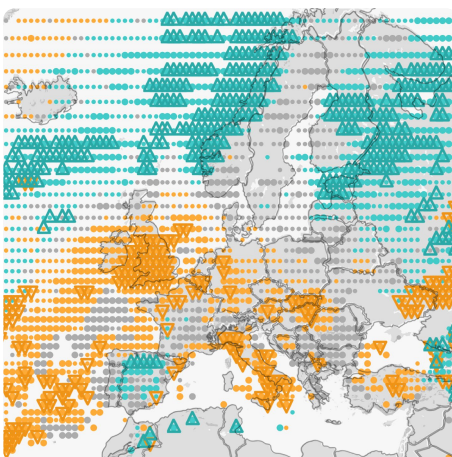
Legend

SUB-SEASONAL

Prediction system used:
NCEP CFSv2

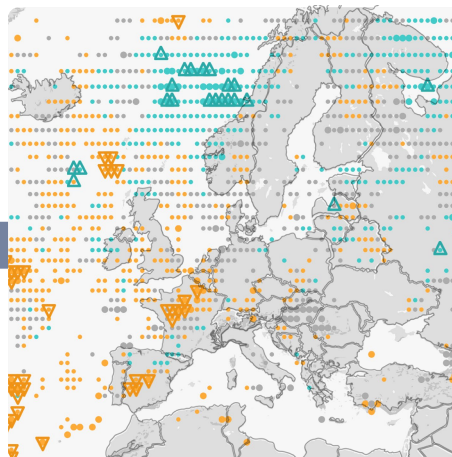
Maps show areas where
skill (fRPSS) > 0

16-22 September



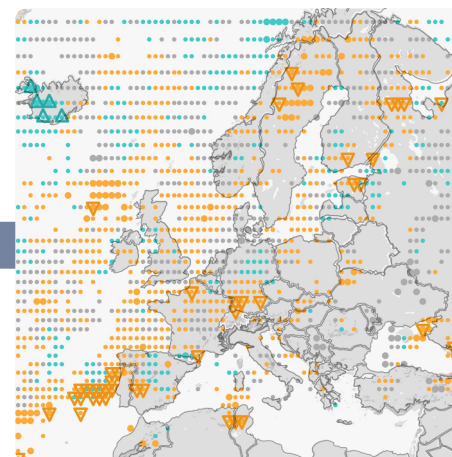
Very high probability of **above normal** precipitation in Norway. High probability of **below normal** precipitation in central Europe and the UK (very high probability).

23-29 September



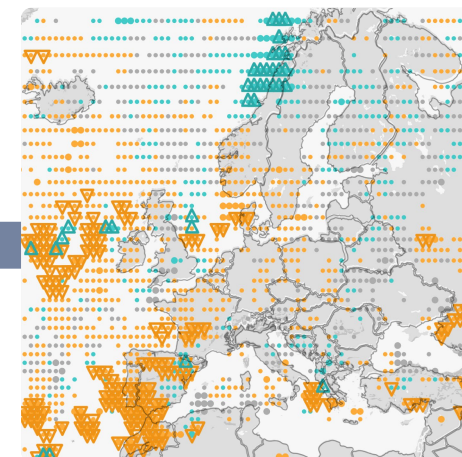
Continued **enhanced** probability of **above normal** precipitation in Norway and **below normal** precipitation in France (low skill).

30 September - 6 October



Generally **enhanced** probability of **below normal** or normal precipitation in Europe (low skill)

7- 13 October



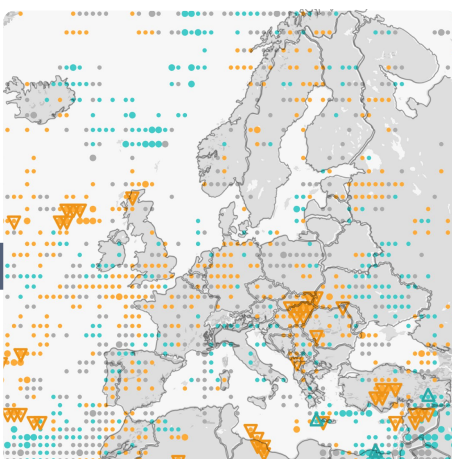
Generally **enhanced** probability of **below normal** or normal precipitation in Europe (low skill).

SEASONAL

Prediction system used:
ECMWF SEAS5

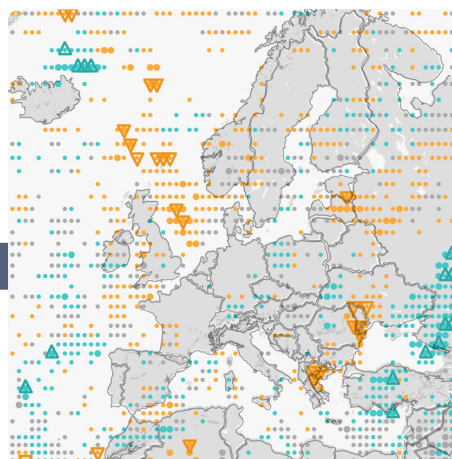
Maps show areas where
skill (fRPSS) > 0

October 2019



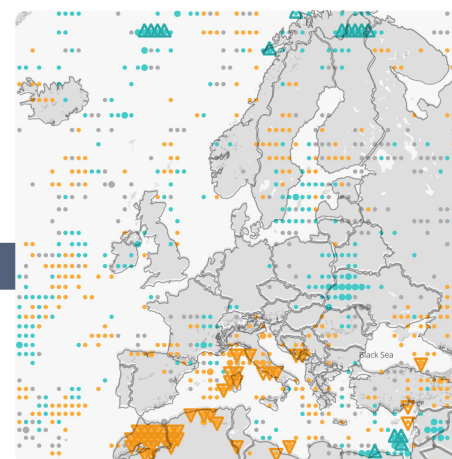
Enhanced probability of **below normal** precipitation in Germany, Slovakia, Hungary and Serbia.

November 2019



Risk of **extreme low** precipitation in some spots in Greece, Romania, Latvia and Estonia.

December 2019



High probability of **below normal** precipitation with risk of **extremes** in Italy, Sardinia and Corsica (skill above 5%).

Browse the global
forecasts in the DST:

www.S2S4E.eu/dst



Solar radiation forecasts

Predicted tercile

- Above
- Normal
- Below

Probability range

- 50% to 100%
- 34% to 49%

Extremes

- ▲ Max (p90)
- ▼ Min (p10)

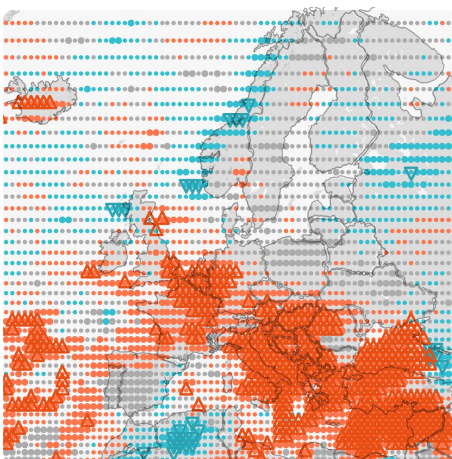
Legend

SUB-SEASONAL

Prediction system used:
NCEP CFSv2

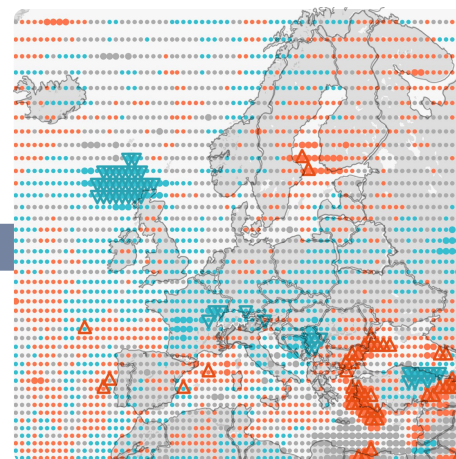
Maps show areas where
skill (FRPSS) > 0

16-22 September



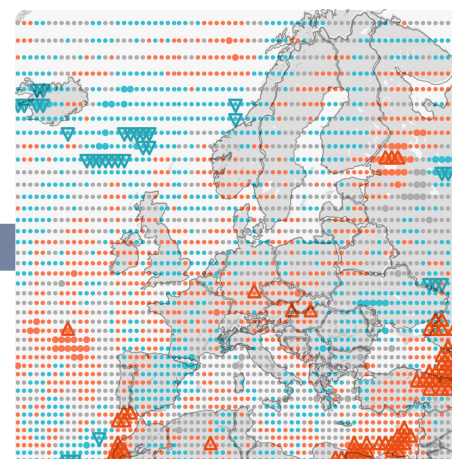
Very high probability of **above normal** solar radiation in most countries in central and eastern Europe including Italy, Balkans and Germany (**high** probability).

23-29 September



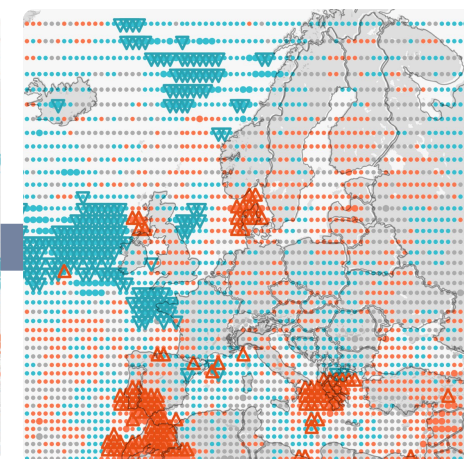
Enhanced probability of **below normal** solar radiation in most countries in central Europe.

30 September - 6 October



Enhanced probability of **above normal** solar radiation in Germany and other countries in central Europe.

7- 13 October



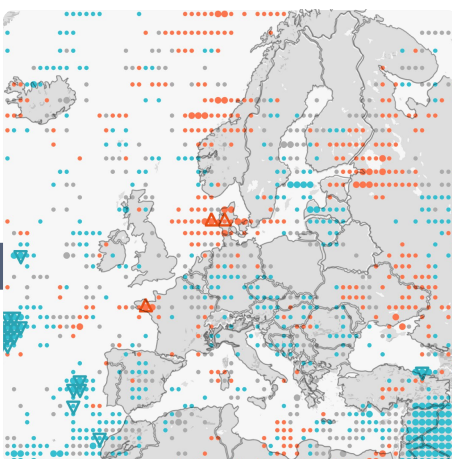
High probability of **above normal** solar radiation in the south of Spain (with 30% skill).

SEASONAL

Prediction system used:
ECMWF SEAS5

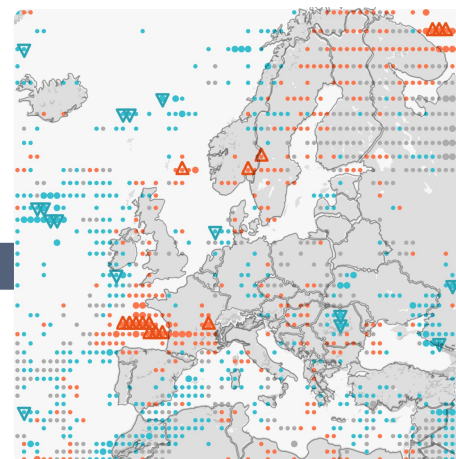
Maps show areas where
skill (FRPSS) > 0

October 2019



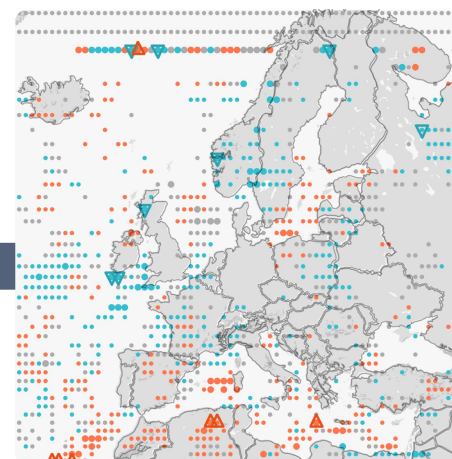
High probability of **above normal** radiation in Denmark (skill above 5%).

November 2019



Enhanced probabilities of **above normal** radiation in southern France.

December 2019



Forecasts show no clear signals; probabilities similar to climatology.

**Browse the global
forecasts in the DST:**

www.S2S4E.eu/dst