

Sub-seasonal to seasonal Outlook

JUNE 2019

The 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. 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.

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 13th of June 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:

www.s2s4e.eu



Subscribe to the outlooks and register to the DST at:

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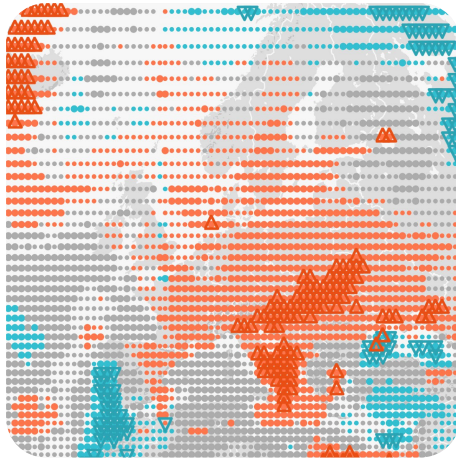
Temperature forecasts



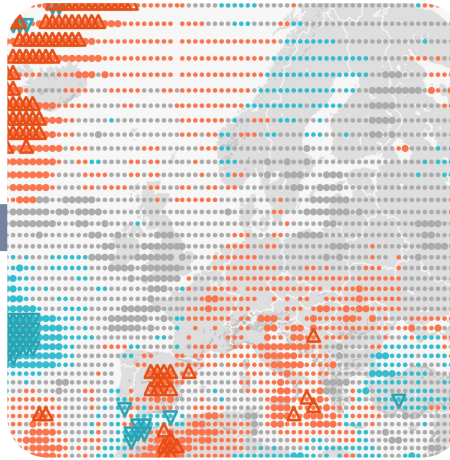
SUB-SEASONAL

For the week of 17-23 June temperatures over most of Europe are predicted to be higher than normal, as indicated by high probabilities for the upper tercile. The highest probabilities are found towards eastern Europe. For the week of 24-30th June, warmer than usual temperatures are likely to persist over central Europe. For week 1-7 July, warm temperatures are expected only in eastern Europe.

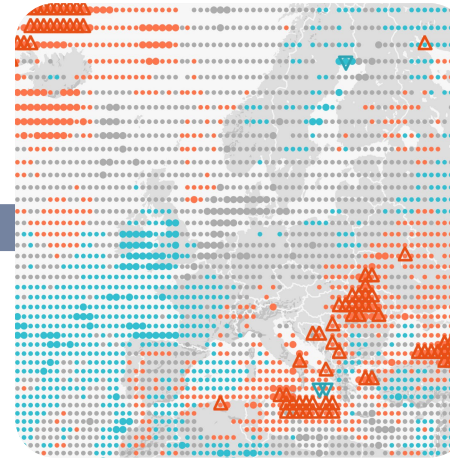
JUNE 17 - 23, 2019



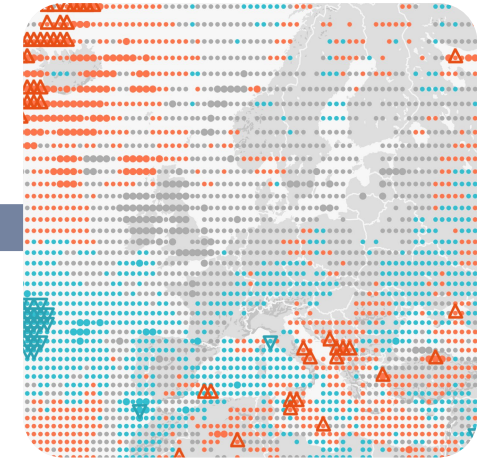
JUNE 24 - 30, 2019



JULY 1 - 7, 2019



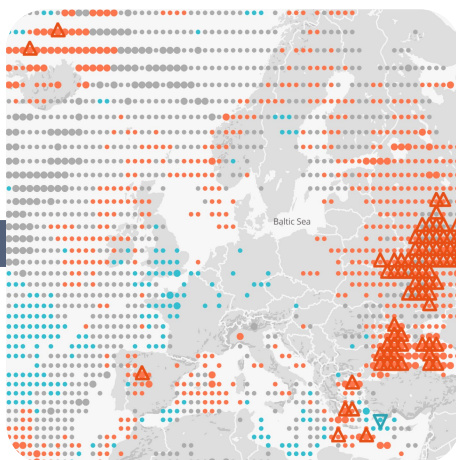
JULY 8 - 14, 2019



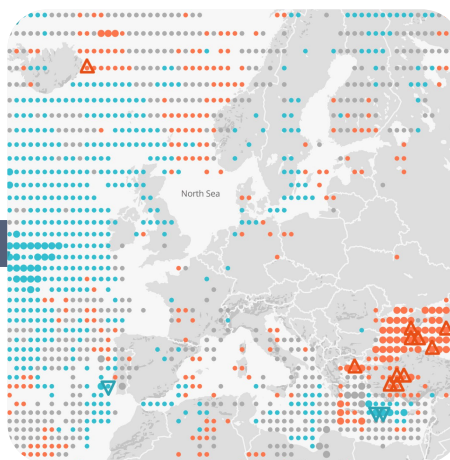
SEASONAL

In July the forecasts show high probabilities of above normal temperatures in eastern Europe, especially around the Black Sea, with increased likelihood of extreme high temperatures. The high temperatures will likely persist over the Black Sea area during August and September, due to high Sea Surface Temperatures persisting through the summer. In west British Isles and North Sea there is an increased probability of above normal temperatures in July, while in the south of the UK and northern France there is increased likelihood of below normal temperatures. In September, temperatures will probably be above normal in most of Europe, especially around the Baltic Sea (excluding the Balkans).

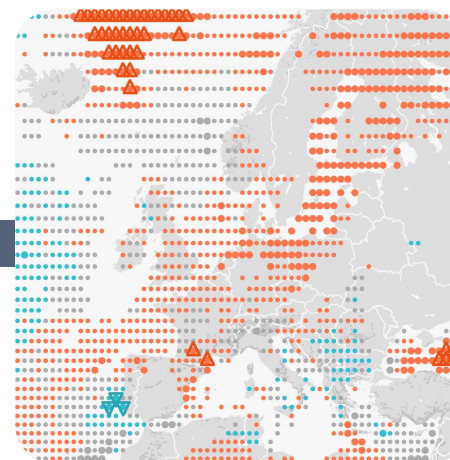
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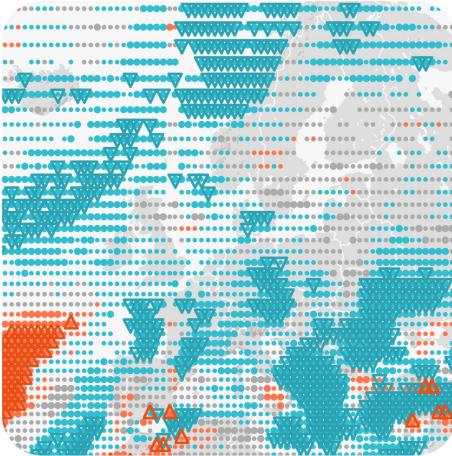
Wind speed forecasts



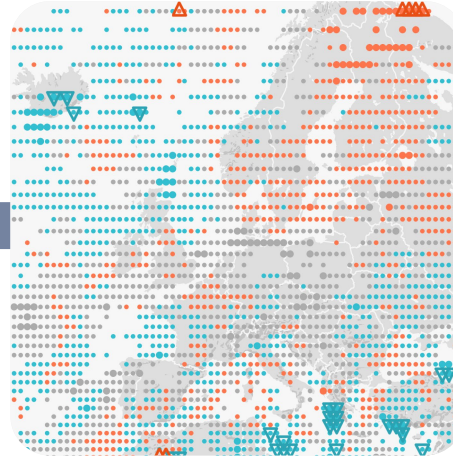
SUB-SEASONAL

For the week of 17-23 June, weaker than usual winds are expected for most of Europe. Only southern part of Scandinavia shows normal conditions. For the following weeks the predictions indicate normal conditions or no clear pattern.

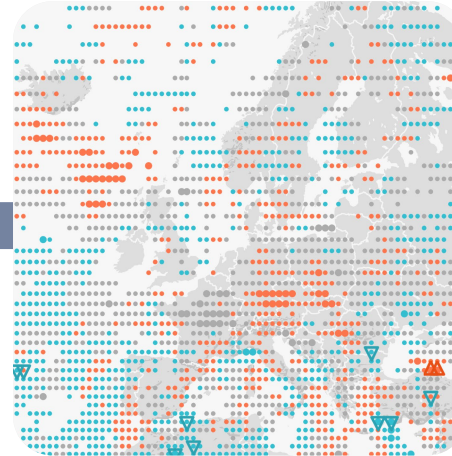
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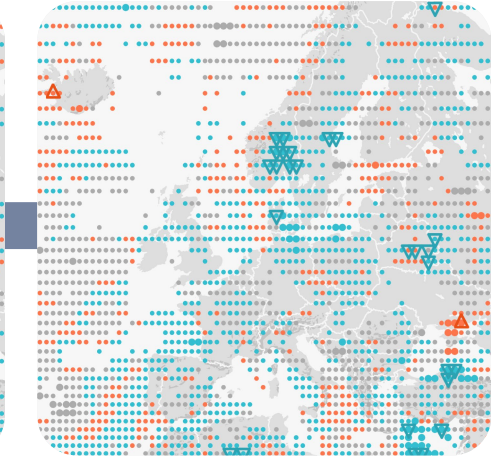
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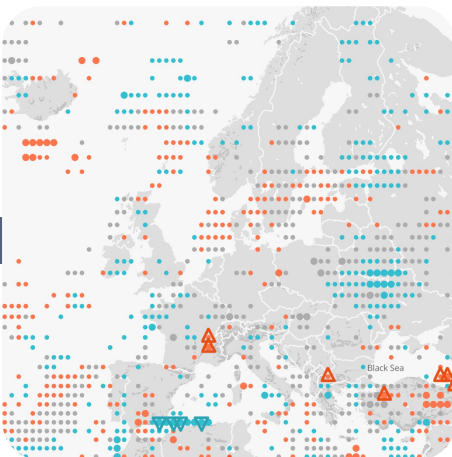
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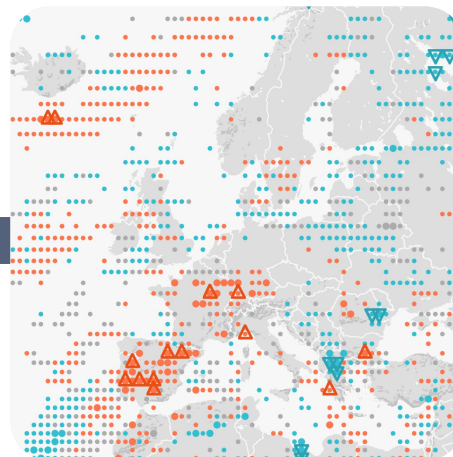
SEASONAL

Wind speed forecasts for July do not show clear patterns over Europe, demonstrating only increased probabilities of below normal wind speeds over eastern Europe and slightly favourable conditions for above normal winds in southern Sweden and Denmark. In August, there is an increased probability of above normal winds in the Iberian Peninsula, France and southern Germany, with likelihood of wind speeds exceeding the P90. In September, although the maps do not show clear patterns, there are reduced probabilities of high winds over Germany, Poland and Czech Republic.

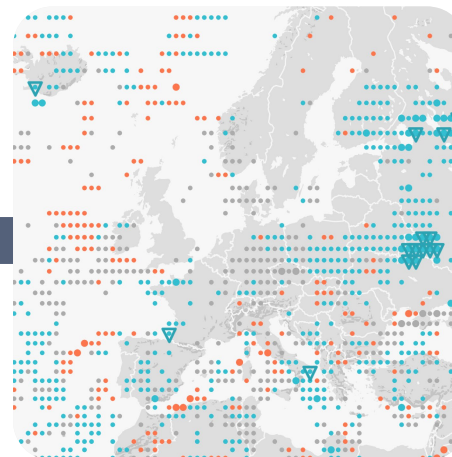
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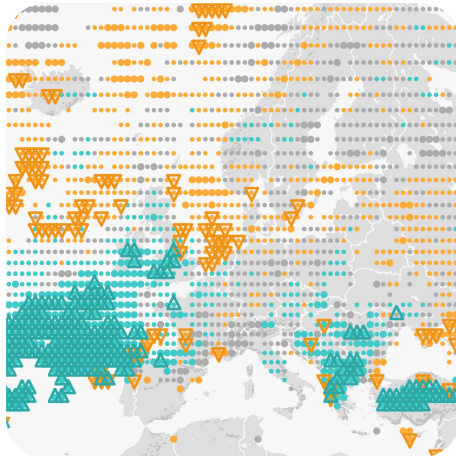
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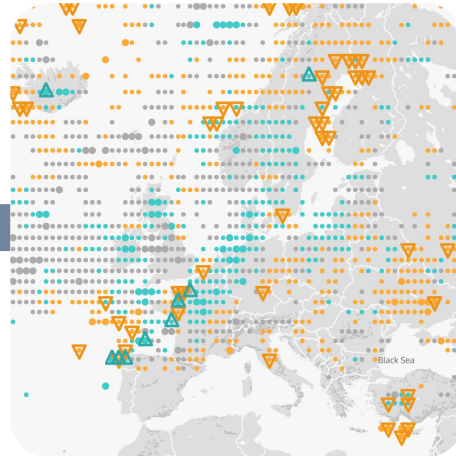
SUB-SEASONAL

For the week of 17-23 June, the model indicates higher than normal rainfall in the Balkan region, Turkey and Ireland. Also there are high chances of intense precipitation coming from the Atlantic that would affect north west of Spain, and west of the British Isles. For the week of 24-30th of June, high probability of above normal precipitation is expected in the north of France, Belgium, The Netherlands and Denmark.

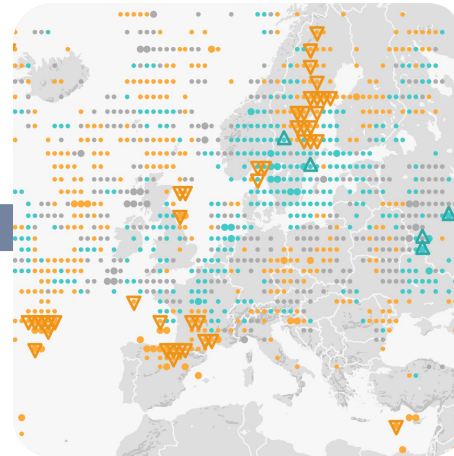
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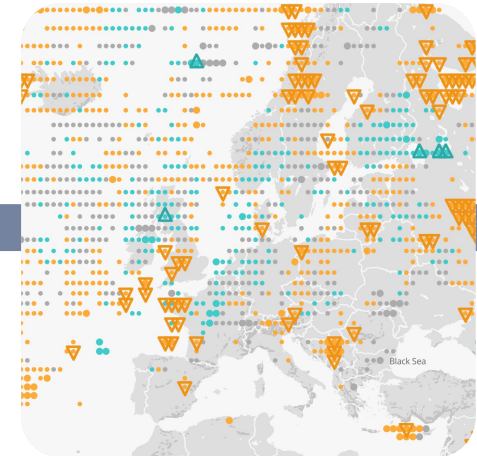
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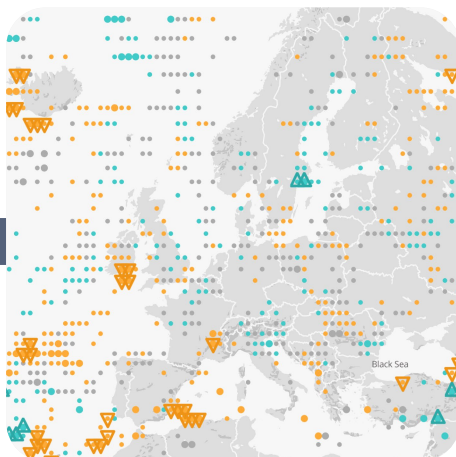
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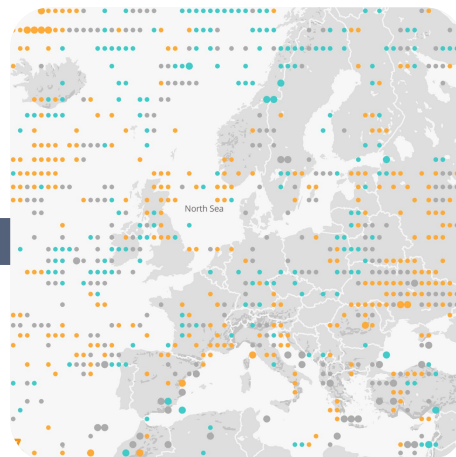
SEASONAL

July and August forecasts show uneven patterns, with dry conditions more probable over eastern Europe. Increased probabilities of a dry September can be seen over southern UK, Belgium, the Netherlands, northern France and western Germany.

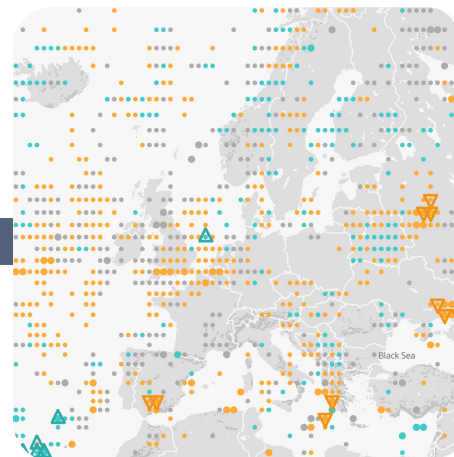
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Solar radiation forecasts

Predicted tercile

- Above
- Normal
- Below

Probability range

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

Extremes

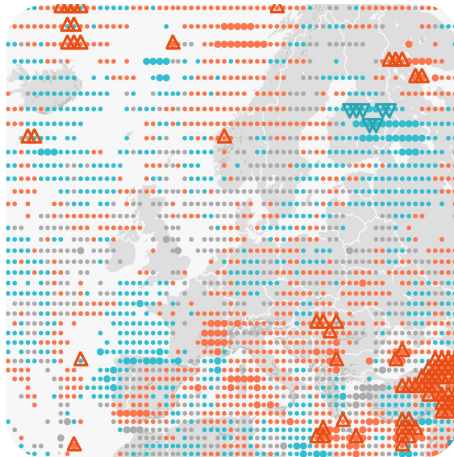
- ▲ Max (p90)
- ▼ Min (p10)

Legend

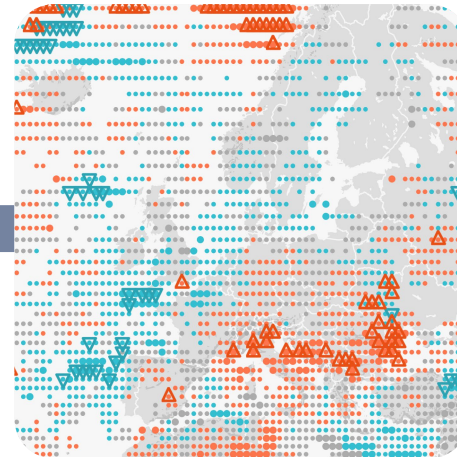
SUB-SEASONAL

High probabilities of higher than normal solar radiation are found in Turkey and the southern part of Spain. For week 24-30 June higher than normal solar radiation is still expected in Spain, and also in Italy and Greece.

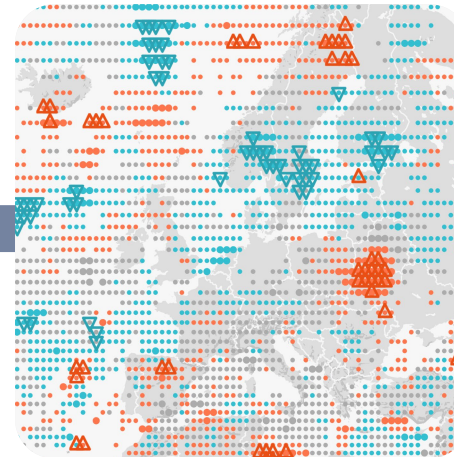
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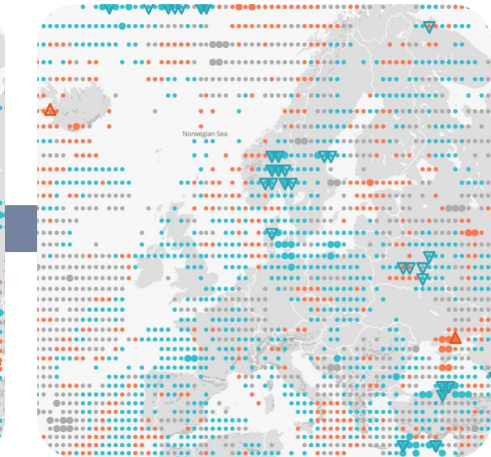
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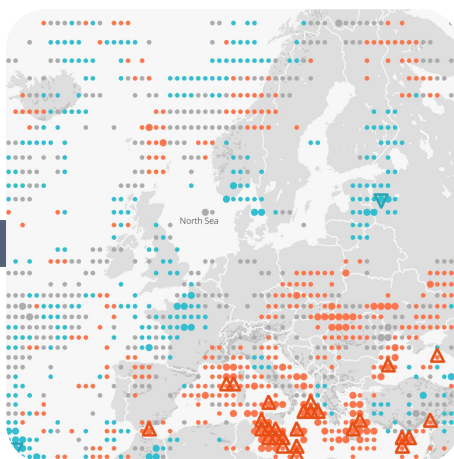
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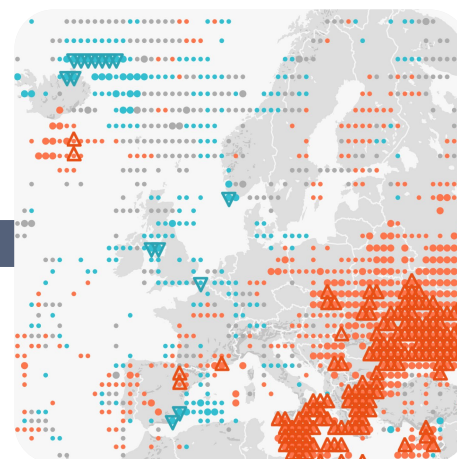
SEASONAL

Forecasts for July show a substantial pattern of increased probabilities of higher than normal solar radiation over the Mediterranean and eastern Europe, with enhanced likelihood of exceeding the P90. High probabilities of below normal radiation can be also seen over northwest France, southern Norway and the Baltic countries. In August a strong radiation pattern intensifies over the Ionian, Aegean and Black Sea areas as well as in eastern Europe. Strong above normal radiation is likely over Poland and Belarus in September.

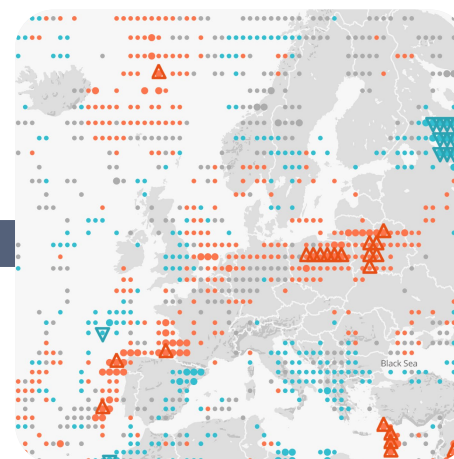
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