S2S4E
Climate Services for Clean Energy

The S2S4E Decision Support Tool
Operational sub-seasonal and seasonal forecasts for Renewable Energy

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Next slide

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WIND POWER

Wind speed and capacity factor predictions

SOLAR POWER

Solar radiation and capacity factor predictions

HYDROPOWER

Prediction and changes in inflow predictions

ENERGY DEMAND

Temperature and consumption rates predictions

Next slide

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Check out the DST mock up in your own device:
https://bit.ly/2OQWV4i

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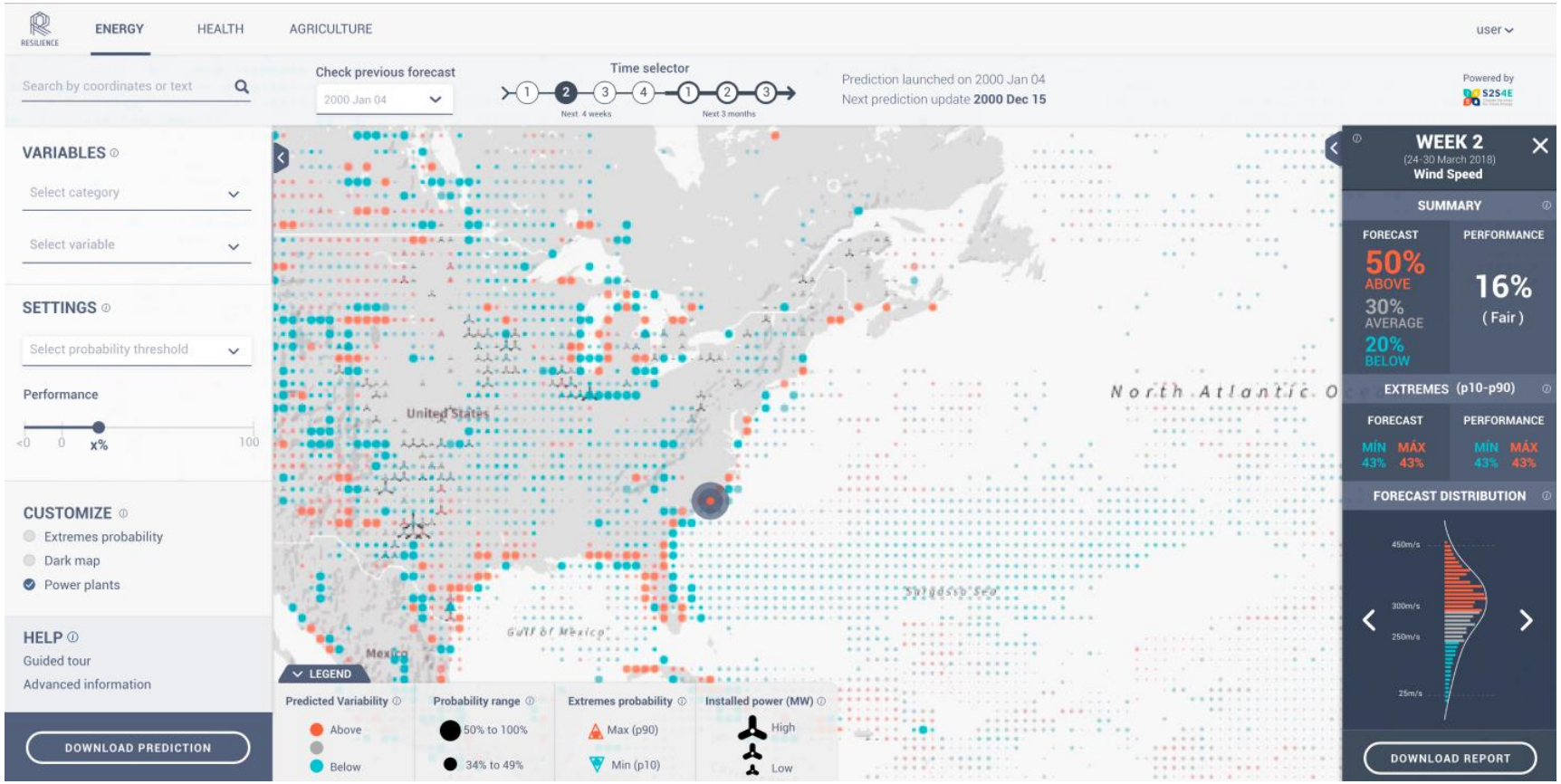

S2S4E GENERAL INFORMATION

- S2S4E is a 3-year project funded by the European Union H2020 Framework Programme for Research and Innovation.

- The main objective of S2S4E is to make the European energy sector more resilient to climate variability and high impact events. This objective will be achieved through the investigation of the frontiers and the potential of S2S predictions, which will be turned into a novel decision support tool (DST).
  This DST has been developed based on S2S climate predictions and tailored to users' needs - mainly energy companies - following a user-centred approach.

From climate data to climate Service

- CONSORTIUM The project is led by the Barcelona Supercomputing Center (Spain) and brings together 5 European research centres, 3 energy companies, 3 SMEs and a large consultancy firm.

Meet the partners

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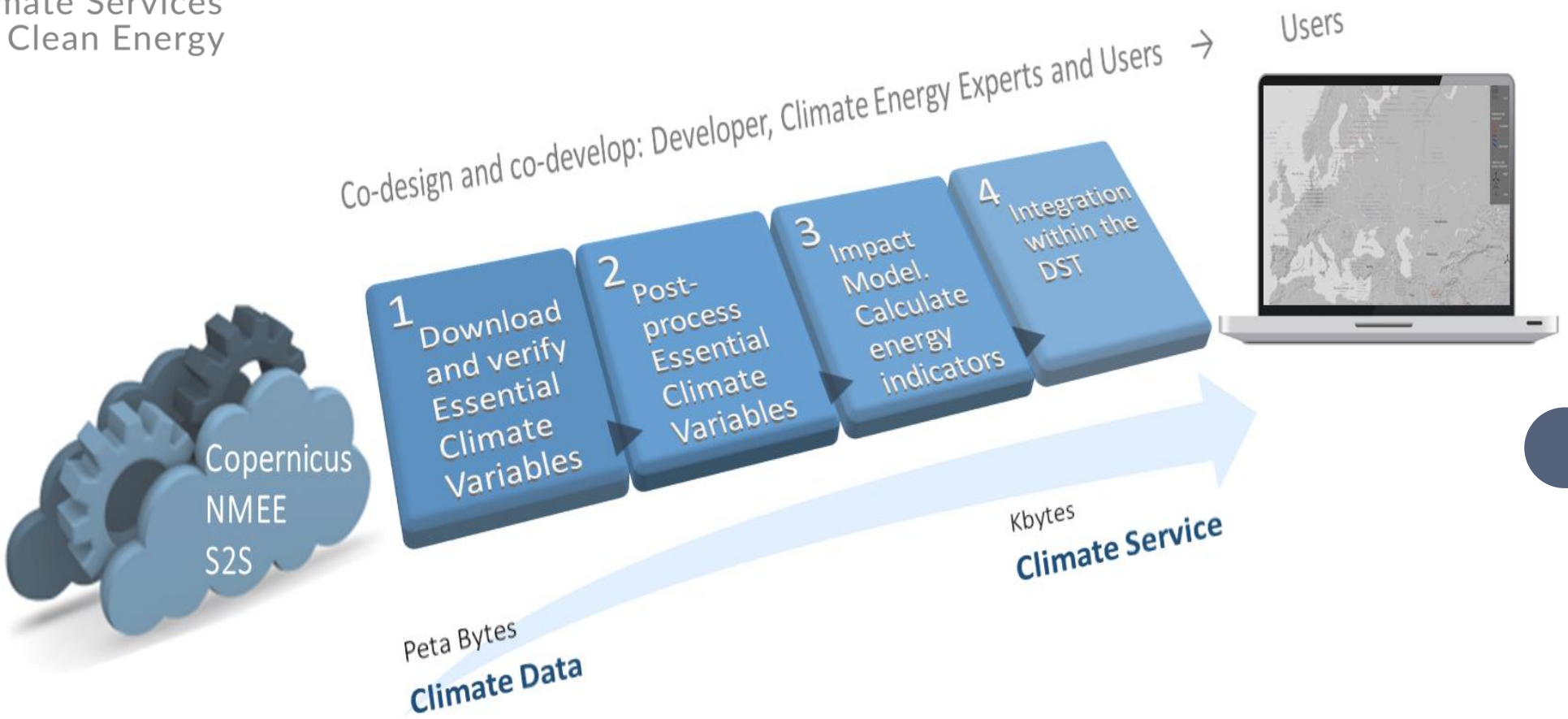

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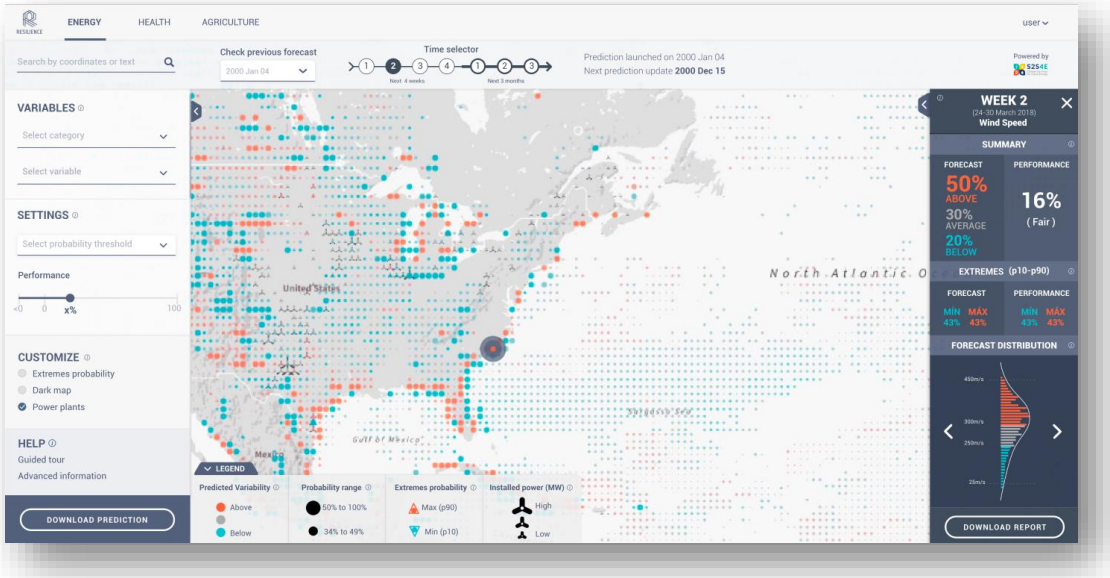
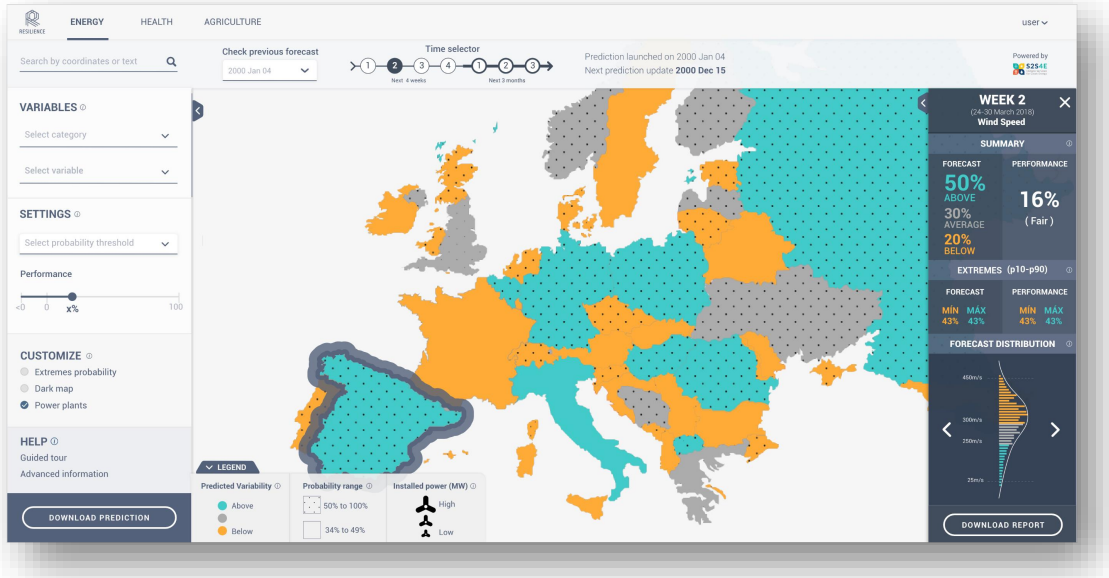
Next slide

The main interface can show gridded or aggregated climate variables and energy indicators

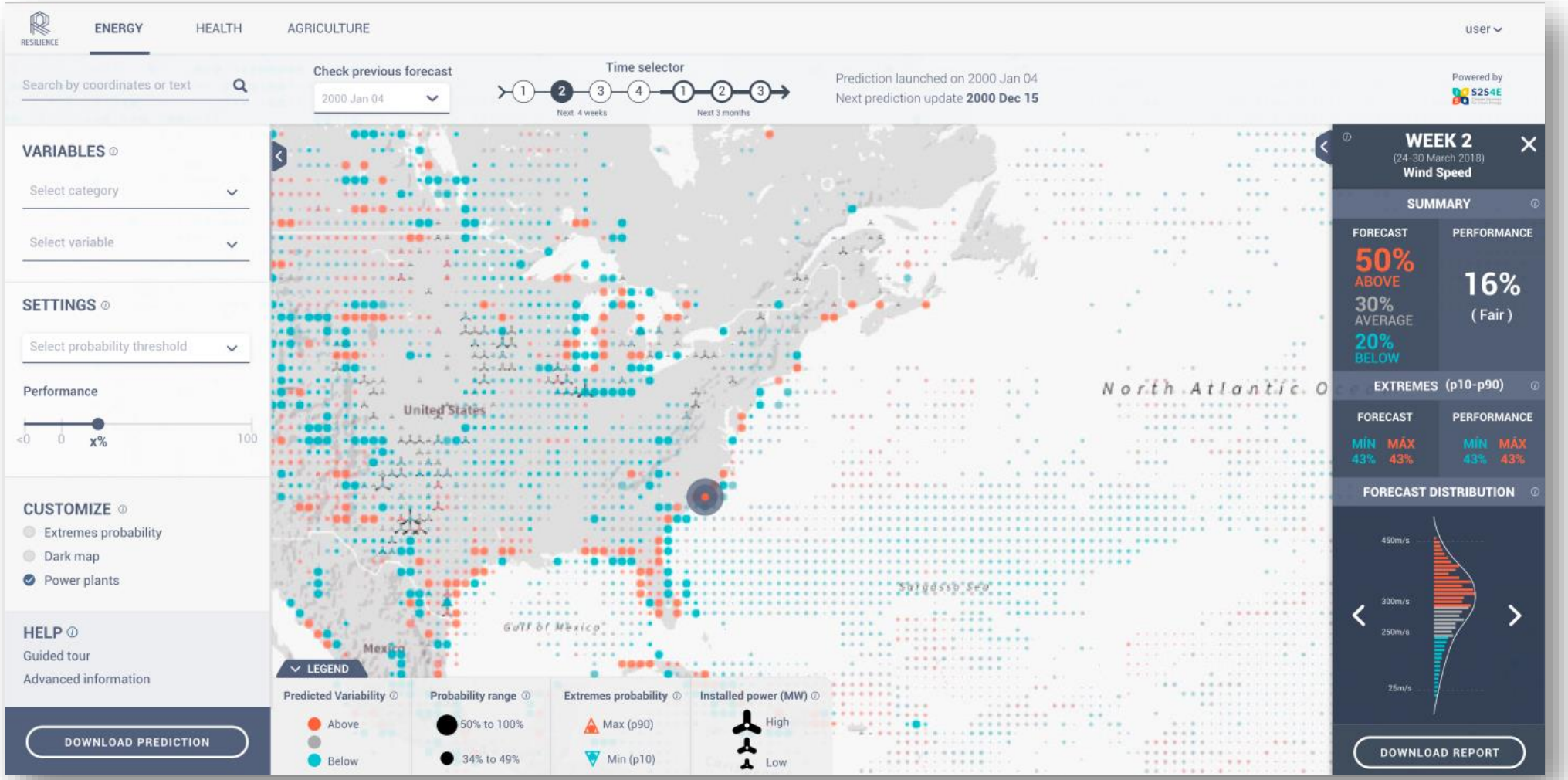
Gridded variables



Aggregated variables

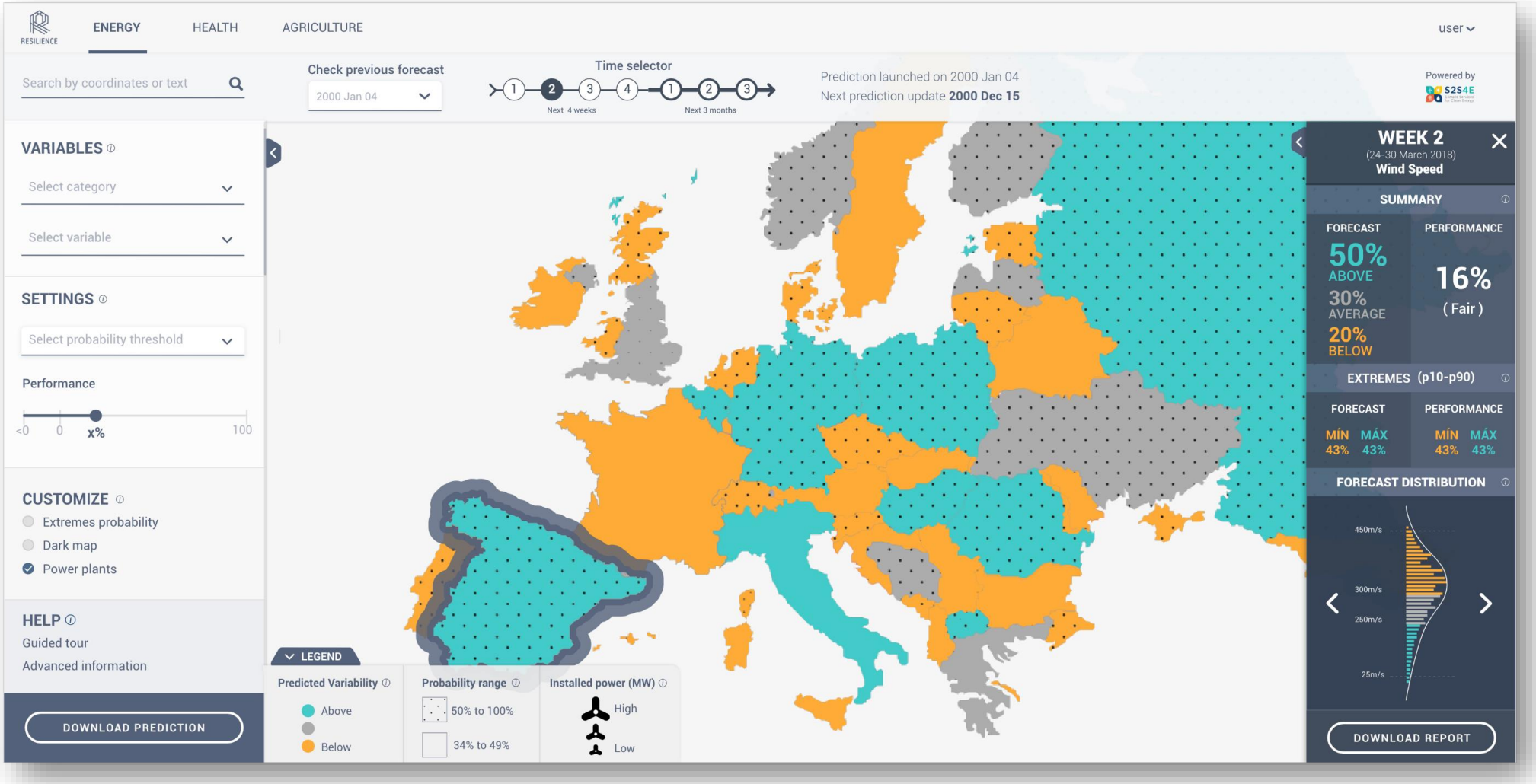


Gridded variables interface

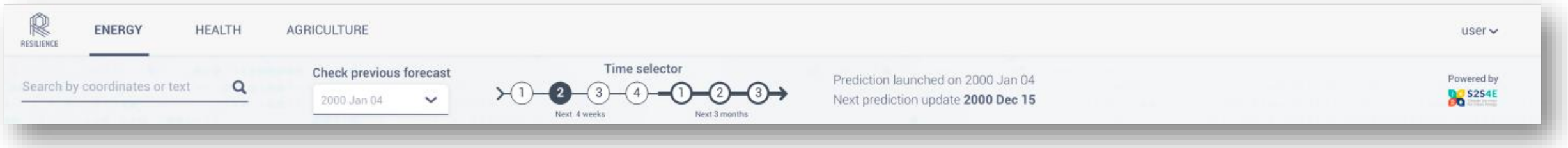


▼ Learn about the DST ▼

Aggregated variables interface



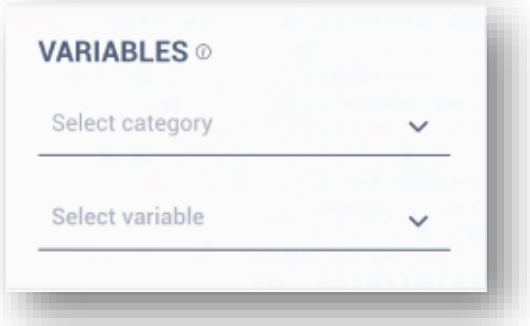
▼ Learn about the DST ▼



Selection of region of interest

Selection of current or past forecasts

Seamless selection of sub-seasonal forecasts (1 to 4 weeks ahead) and seasonal forecasts (1 to three months ahead)



◀ **Selection of variables category**

◀ **Selection of variables and energy indicators within the category**

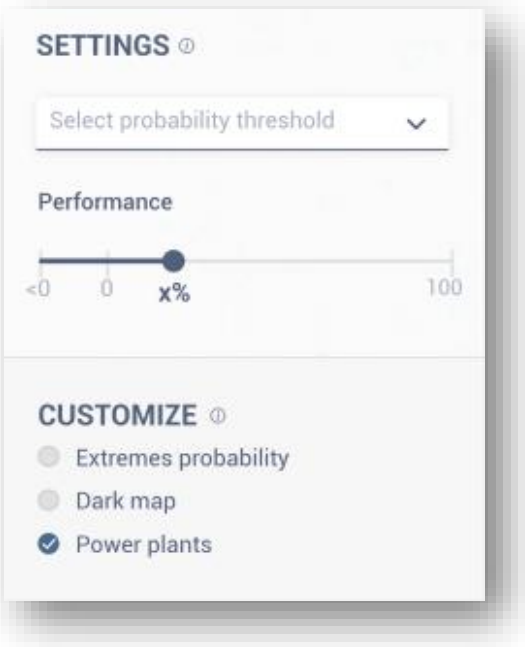
CATEGORIES

- **Essential Climate Variables**
- **Wind energy**
- **Solar energy**
- **Hydro power**
- **Energy balance**

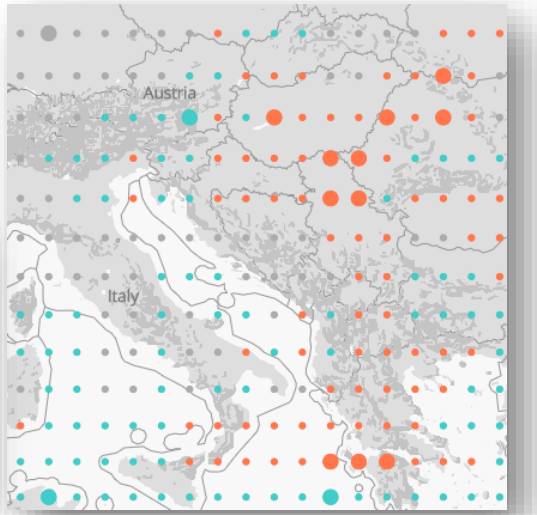
TYPES OF VARIABLES

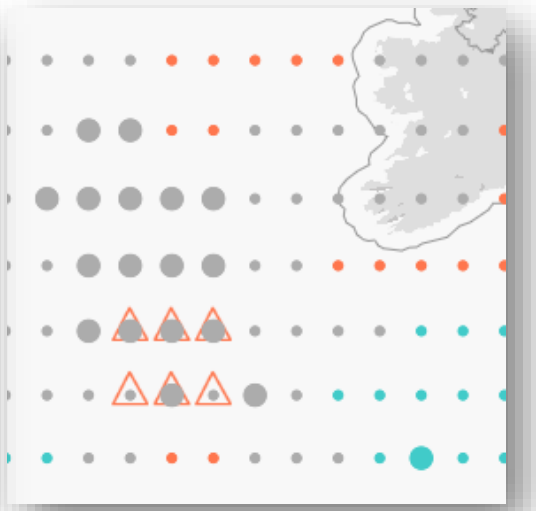
- **Essential Climate Variables**
  - Wind speed
  - Temperature, Tmax, Tmin
  - Precipitation
  - Solar radiation
  - Sea level pressure

- **Energy indicators**
  - Wind capacity factors
  - Solar capacity factor
  - Change in inflow
  - Annual snow max. anomaly
  - Energy demand
  - Wind energy production
  - Solar energy production
  - Energy balance



- **Select a probability threshold.** Only locations with a probability above the threshold in the most likely tercile are shown with big ball
- **Hide forecast visualisation according to selected RPSS skill score value**
- **Highlight locations with more than 25% predicted probability above p90 or below p10.**





Forecast period information and selected variable

Most likely tercile forecasted and its probability

Predicted probability below the p10 percentile and above the p90 percentile

Option to download detailed reports of the forecast of the selected location

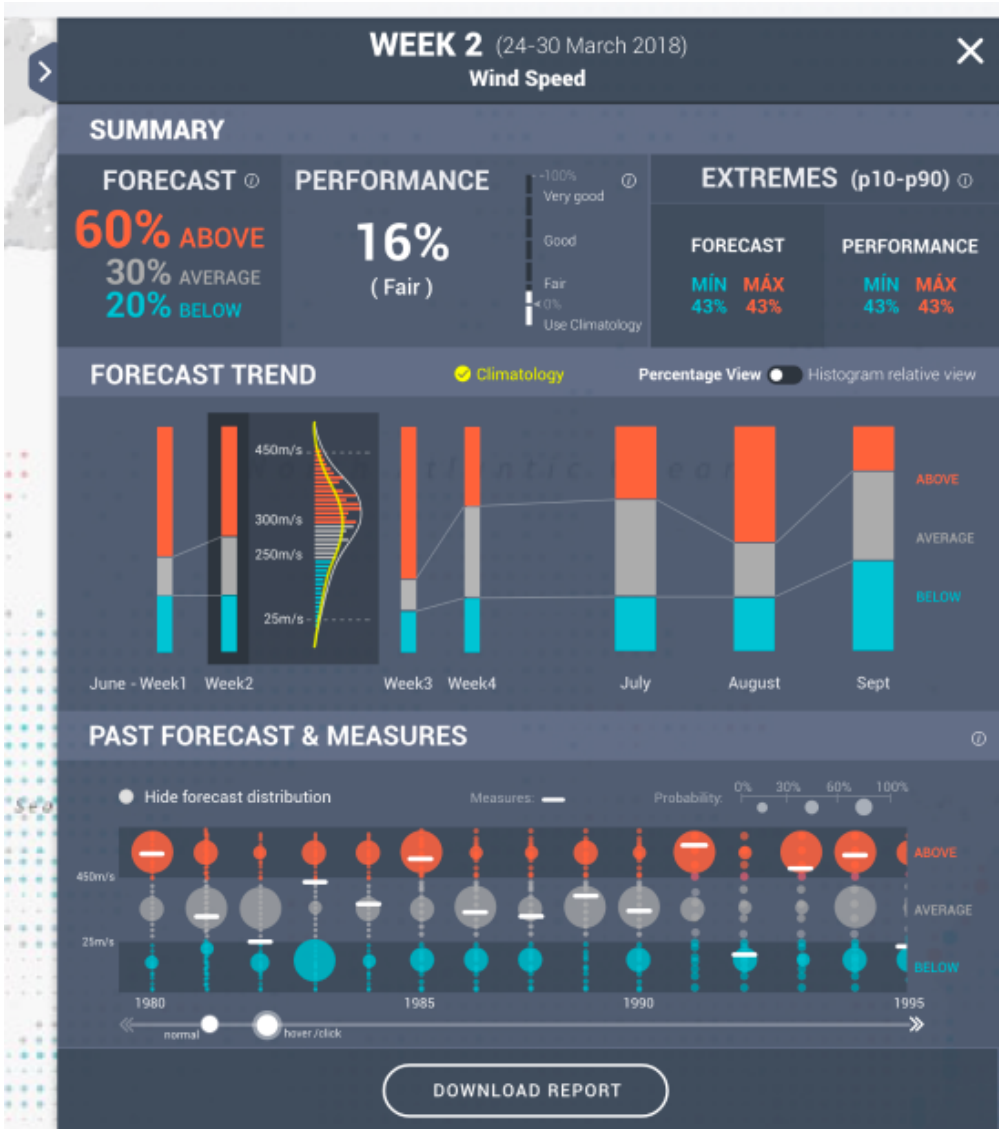
RPSS skill score of the forecast and translation into qualitative scale

BSS skill scores for the >p90 and <p10 forecasts

Ensemble members distribution and probability function

Click in the tab expands the detailed panel into the advanced panel

Forecast trend shows the forecasted probabilities for all the time windows at sub-seasonal and seasonal time scales



Summary information is the same as in the detailed panel

The past forecasts are shown together with reanalysis values

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17-21 JUNE 2019
EU SUSTAINABLE ENERGY WEEK
SHAPING EUROPE'S ENERGY FUTURE

Official EUSEW 2019 Side Event

DST LAUNCH EVENT

Thursday, June 20th, 14:00h

at

Norway House, Brussels

5 minutes walk from the Berlaymont

If you want to attend, please write to S2S4E@bsc.es