



R&D Organisation / Participants

## Barcelona Supercomputing Center (BSC)

The Department of Earth Sciences of the Barcelona Supercomputing Center (BSC-ES) is one of the most active groups in air quality and atmospheric composition modelling, climate prediction and climate services in Europe. The department is currently composed of about 100 people, including scientific, technical and support staff. The BSC-ES mission is performing research on environmental forecasting, with a particular focus on the atmosphere-ocean-biosphere system. This research seeks to support the main societal challenges related to global air quality and climate change through the use of models and data analysis applications in high-performance computing (HPC) and big data infrastructures. Another key task is the dissemination of real-time air quality and climate information based on its research expertise in collaboration with both the Spanish authorities and the World Meteorological Organisation (WMO).

### AREAS OF ACTIVITY

**Agriculture, Biodiversity, Nature-Based Solutions, Ecosystem Services, Citizen Engagement, Climate Modelling, Climate Risks & Responses, Disaster Risk Management, Climate Services, Data, Knowledge, Digital Services, Earth observation & Environmental Observation, Energy Sector, Health Sector, Research & Development, Urban Planning, Water Management**

Registered on May 10, 2021

### OPPORTUNITIES

#### PROJECT

#### **S2S4E - Sub-seasonal to Seasonal climate forecasting for Energy**

S2S4E was a three-year project conducting research on climate services for clean energy, led by the Barcelona Supercomputing Centre. The consortium included climate research institutions, renewable energy producers, a consulting company and other industrial partners from seven countries across Europe. In the project, an operational Decision Support Tool (S2S4E DST; <https://s2s4e-dst.bsc.es/>) was co-developed together with stakeholders from the energy sector. The S2S4E DST provided sub-seasonal to seasonal climate predictions for renewable energy production and electricity demand, demonstrating how these forecasts can help energy companies plan their operations and prepare for climate variability and

extreme weather events. This enhances their climate change adaptation capacities and supports the integration of a larger share of renewables into the energy mix, contributing to climate change mitigation. Contact: Albert Soret

<https://www.ecca21.eu/participants/638> Official website of the project:

<https://s2s4e.eu/>

#### Applies to

Database, ICT solutions, Energy sector, Water management, Climate services, Earth observation, Climate forecasting, Platforms, websites, Extreme weather events, Demonstration activities, Climate change adaptation, Marine, coastal, fluvial management, Disaster risk management and reduction, Decision support tools, decision-making



#### ECCA 2021 - Climate Adaptation solutions - S2S4E

Video <https://youtu.be/FUEE8jQ79wA>

