

EMS Annual Meeting 2026

ES1.1 MeteoGate

A one-stop shop for sharing, discovering and
accessing meteorological data

Jane Wardle

Finnish Meteorological Institute



**SE9 – USING METEOGATE
THIS AFTERNOON
13.30 – 16.00**

Breakout room 5 (Media Plaza)

Jane Wardle

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Open data is available...

...BUT CAN ANYONE FIND AND USE IT?

- What data exists?
- Is it suitable for my needs?
- How do I actually get it?

Open data $\neq$ easy-to-use data



Built by the meteorological community for our community and beyond

- Federated
- Cloud-based
- API access
- Not just another data portal



The screenshot shows the MeteoGate website homepage. At the top left is the EUMETNET MeteoGate logo. At the top right is the European Union flag with the text 'Co-funded by the European Union'. The main heading reads 'Discover and access European meteorological data and information'. Below this is a section titled 'Featured European APIs providing data across Europe'. This section is divided into four columns: Weather Radar, Warnings, Surface Observations, and Climate. Each column contains a list of links with external icons.

EUMETNET MeteoGate Co-funded by the European Union

Discover and access European meteorological data and information

Featured European APIs providing data across Europe

Weather Radar	Warnings	Surface Observations	Climate
→ What is Open Radar Data (ORD) API	→ What is Warnings API	→ Surface observation API	→ Climate data API
→ Open Radar Data API	→ How to get started	→ How to get started	→ How to get started
→ How to download weather radar data	→ How to download warning data	→ How to ingest data	
→ How to publish weather radar data (EUMETNET Members only)	→ What is CAP	→ How to download data	

Discover

FIND DATA YOU DIDN'T KNOW EXISTED

Discover and access European meteorological data and information

Featured European APIs providing data across Europe

Weather Radar

- [What is Open Radar Data \(ORD\) API](#)
- [Open Radar Data API](#)
- [How to download weather radar data](#)
- [How to publish weather radar data \(EUMETNET Members only\)](#)

Warnings

- [What is Warnings API](#)
- [How to get started](#)
- [How to download warning data](#)
- [What is CAP](#)

Surface Observations

- [Surface observation API](#)
- [How to get started](#)
- [How to ingest data](#)
- [How to download data](#)

Climate

- [Climate data API](#)
- [How to get started](#)



Data Explorer

Browse, preview and access meteorological data in one place.

[Open Data Explorer](#)[Data Explorer User Guide](#)

Overview

- [Home](#)
- [Overview](#)
- [Discovering and Accessing Data](#)
- [Architecture](#)
- [Terms and conditions](#)
- [Glossary](#)
- [References](#)

API keys

- [Accessing Data](#)
- [API Key portal](#)

Support

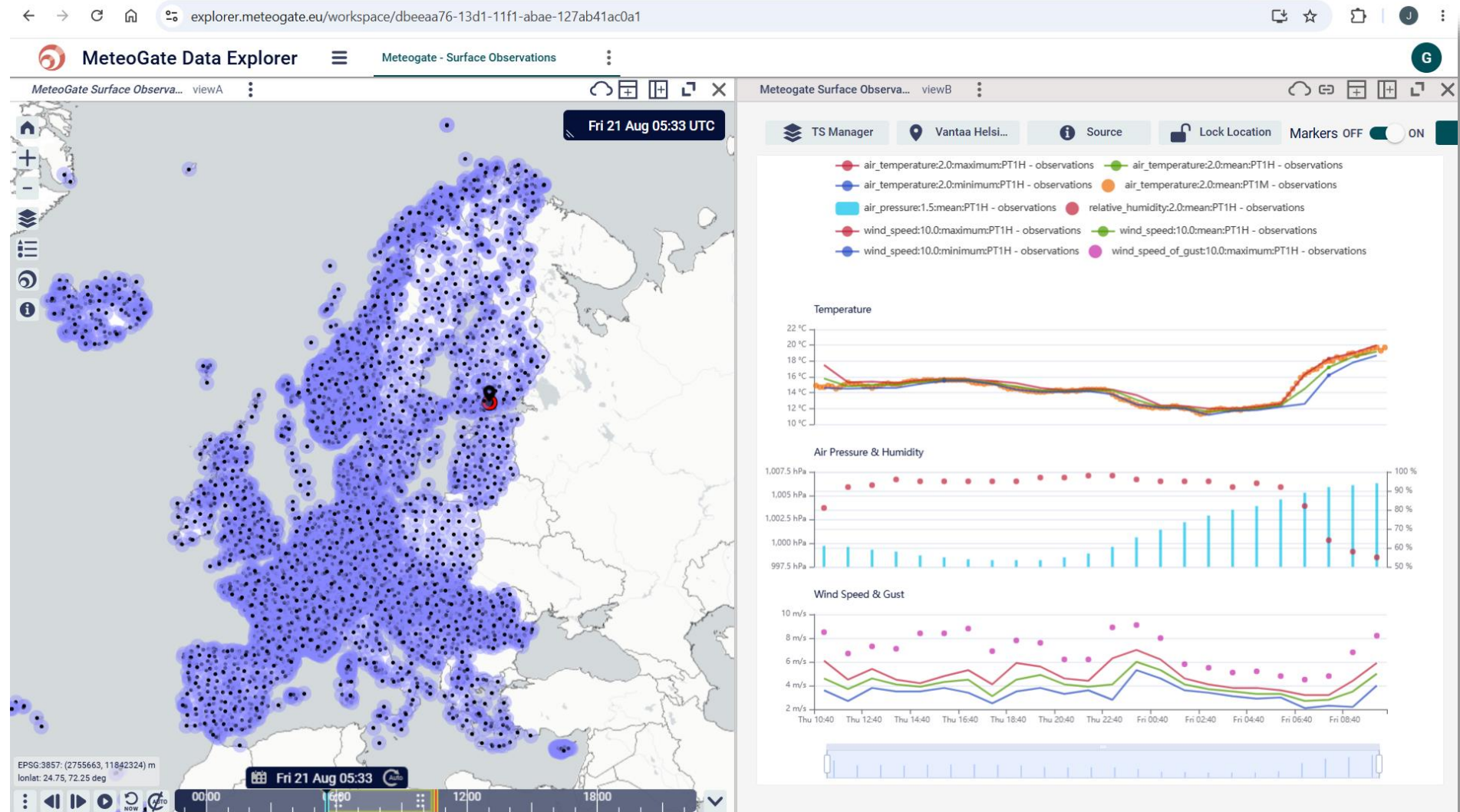
- [Service Notices](#)
- [Documentation](#)
- [Discussion Forum](#)
- [Service Desk contact](#)
- [Glossary](#)

EUMETNET Members

- [Publishing data](#)
- [FEMDI Programme](#)

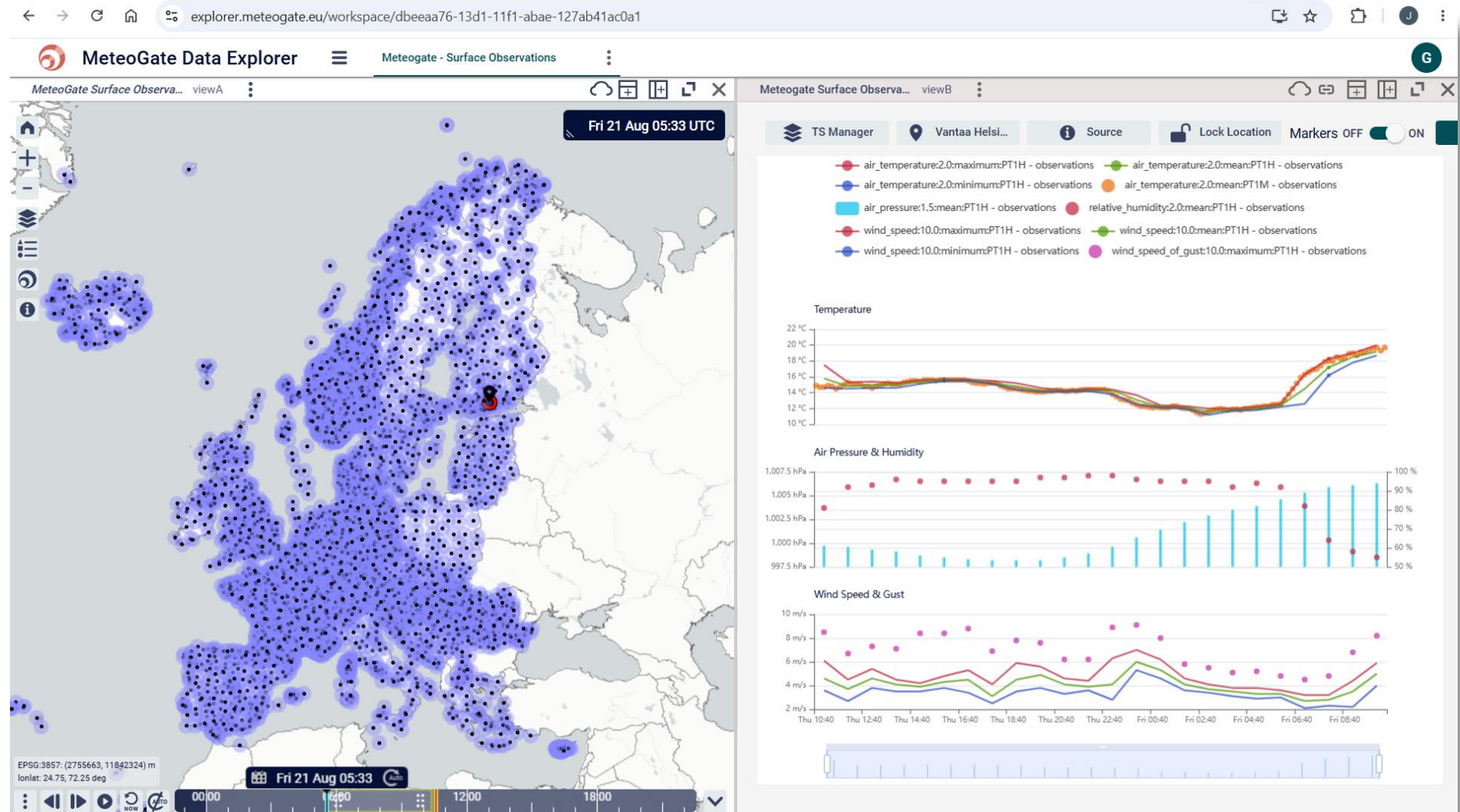
Find data you didn't know existed from 33 NMSs

- Search
- Explore
- Get notified



Is this the data
that I'm looking
for?

- Find dataset
- Preview data
- Check
metadata



Designed for both people and machines

EUMETNET's APIs:

- Weather Radar
- Surface Observations
- Warnings
- Climate data

Each has a single API to access all the different datasets and products across Europe

Discover and access European meteorological data and information

Featured European APIs providing data across Europe

Weather Radar

- [What is Open Radar Data \(ORD\) API](#)
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OBSERVATIONS EDR API

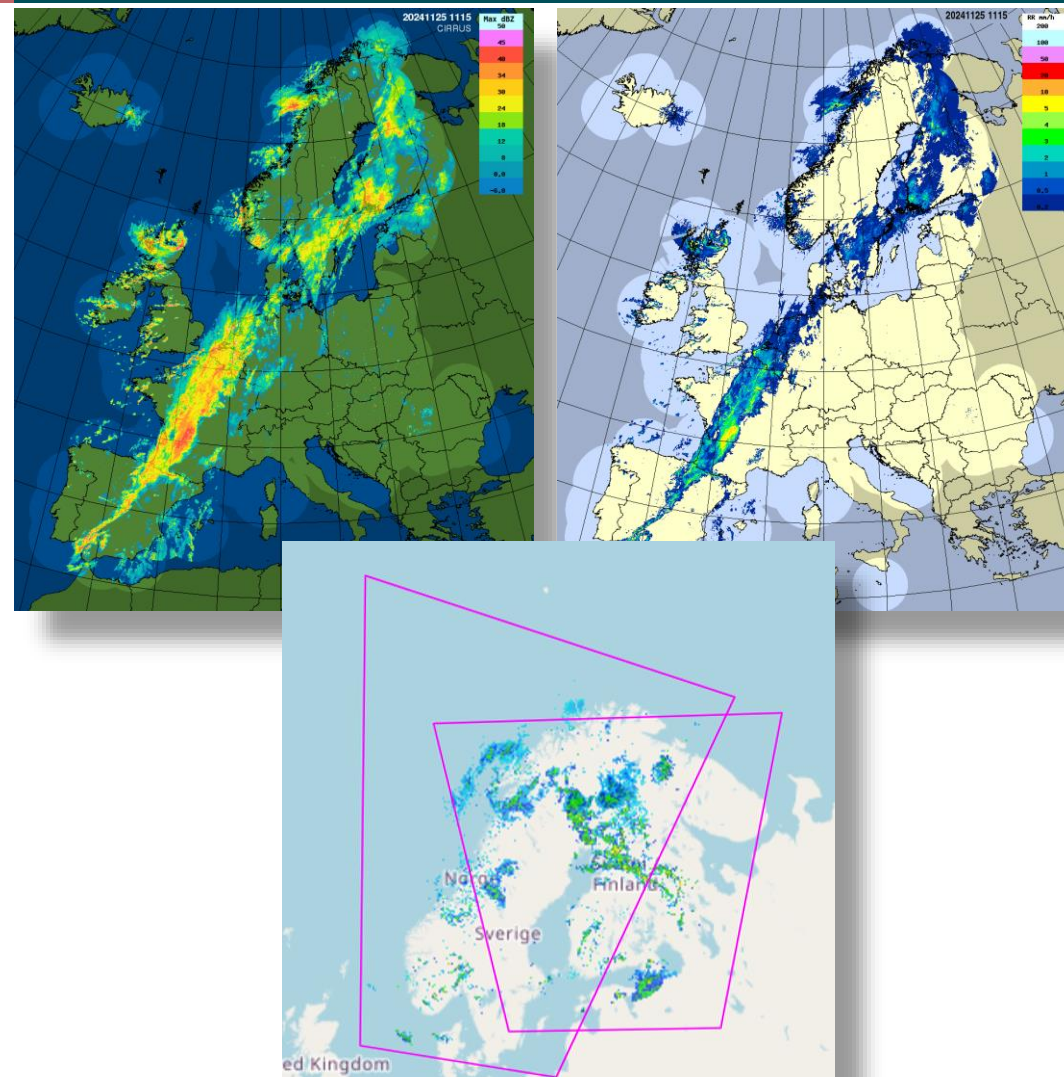
Uses the Open Geospatial Consortium (OGC) API for Environmental Data Retrieval ([OGC-API EDR](#)) interface for retrieving observations from the system



RADAR DATA OGC-API EDR

- Single site radar data
- Composite products data archives

Supplied using ORD EDR API or listening MQTT (messaging queue) accessing direct link to the S3 buckets.



CLIMATE AGGREGATOR

- Exposes NMSs' APIs to MeteoGate
- Ensures uniform output (CoverageJSON or NetCDF), in a federated manner
- ECA&D dataset
- Aggregates climate data from all individual APIs into one dataset

Users can access individual and aggregated climate datasets.



EUMETNET APIs

One authoritative warning source from Alerting authorities across 39 European countries.

Multiple formats and interfaces supporting integration into a wide range of downstream services and applications.

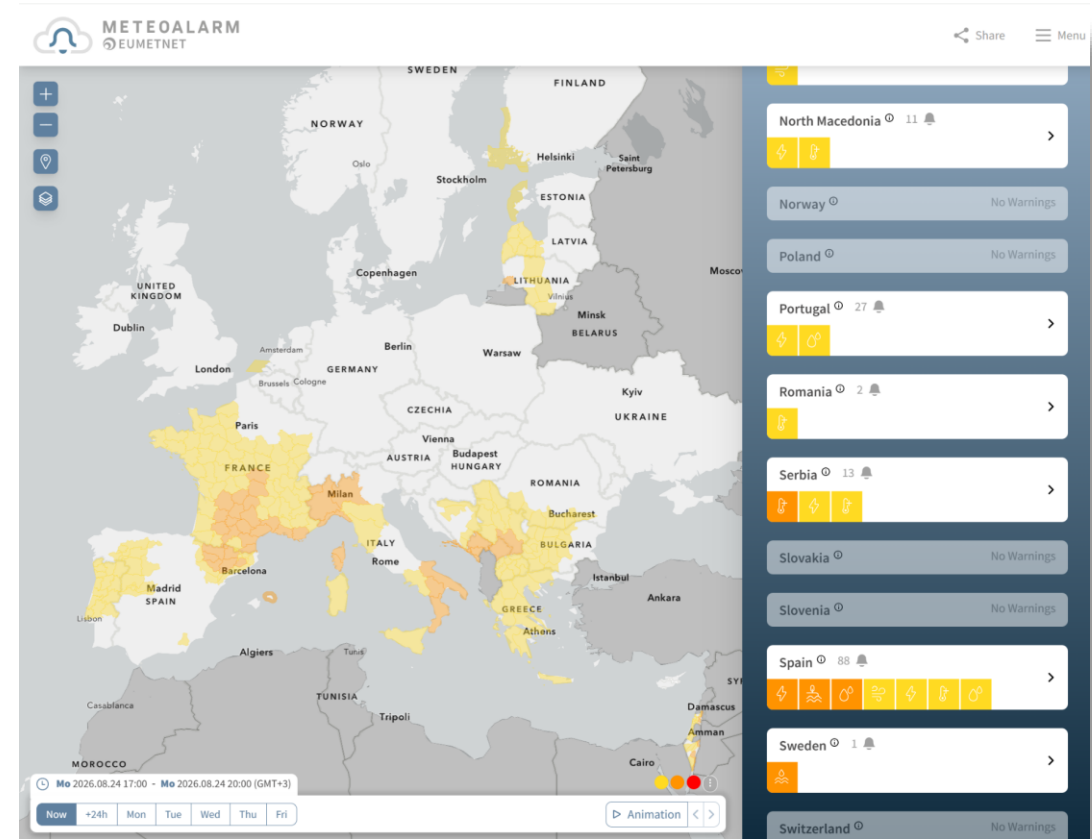
MQTT | NEAR-REAL-TIME

- Publish/subscribe architecture
- Available Formats: CAP XML · JSON · GeoJSON

OGC API – EDR | ARCHIVE

- Access and query archived warnings
- Standards-based OGC interface
- Available Formats: CAP XML · JSON · GeoJSON

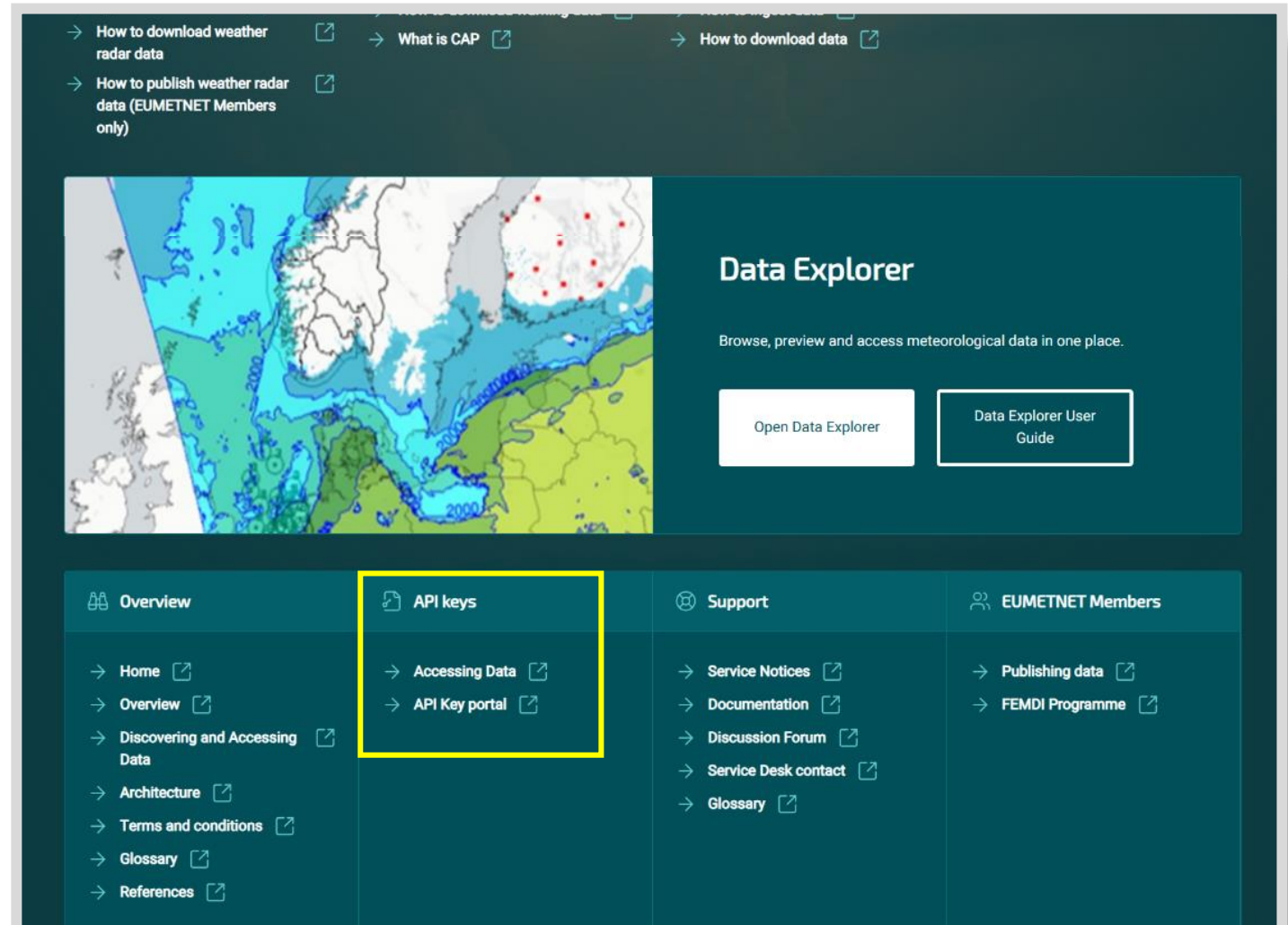
METEOALARM WARNINGS



MeteoGate API key

REGISTERED USERS

- Register once for an API key, use with any of the datasets available in MeteoGate
- See available routes
- Get better rate limits
- Get service notices



Lots of open data available!

TIME TO START USING IT



Discover and access European meteorological data and information

MeteoGate.eu

Open data = easy-to-use data

FIND OUT MORE THIS AFTERNOON
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