

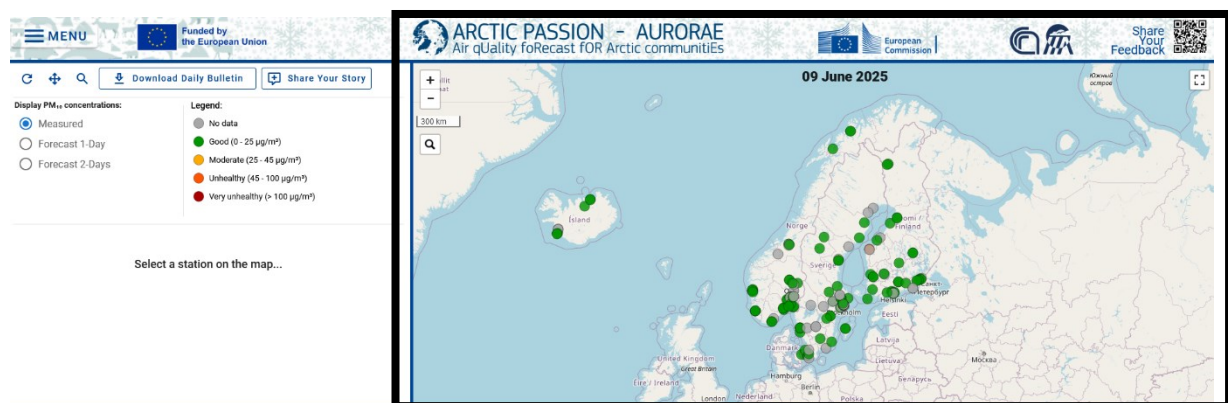
User's guide to the AURORAE website

The **AURORAE** (Air Quality Forecast for Arctic Communities) service is a web interface available at the following address <https://aurorae.azurewebsites.net/> and consisting in a visual tool to monitor the air quality of the North European countries on daily basis and to provide a two-day forecast of particulate matter (PM₁₀) concentrations. The web page is designed for non-scientific users such as communities, stakeholders and citizens.

The air pollution near-real-time concentrations and the forecast are visualized on the map as separate layers, each monitoring station is represented as a dot and depending on its colour the air quality is classified from good to unhealthy. In addition, the monitored past trend of air pollution at a selected station and the forecast at hourly resolution can be visualized a separate interactive window. The particulate matter forecast released every day for each station can be downloaded as a txt file and the AURORAE service also provides a daily bulletin reporting the forecast for all the stations to provide a broad overview of air pollution status for all Northern European communities.

Navigating the Air Quality Map

The European Arctic air quality map is an interactive tool that allows you to explore the air quality data from various stations across the region. The following sections explain how to use the map and access the relevant data:





Select a station on the map...

Map Overview

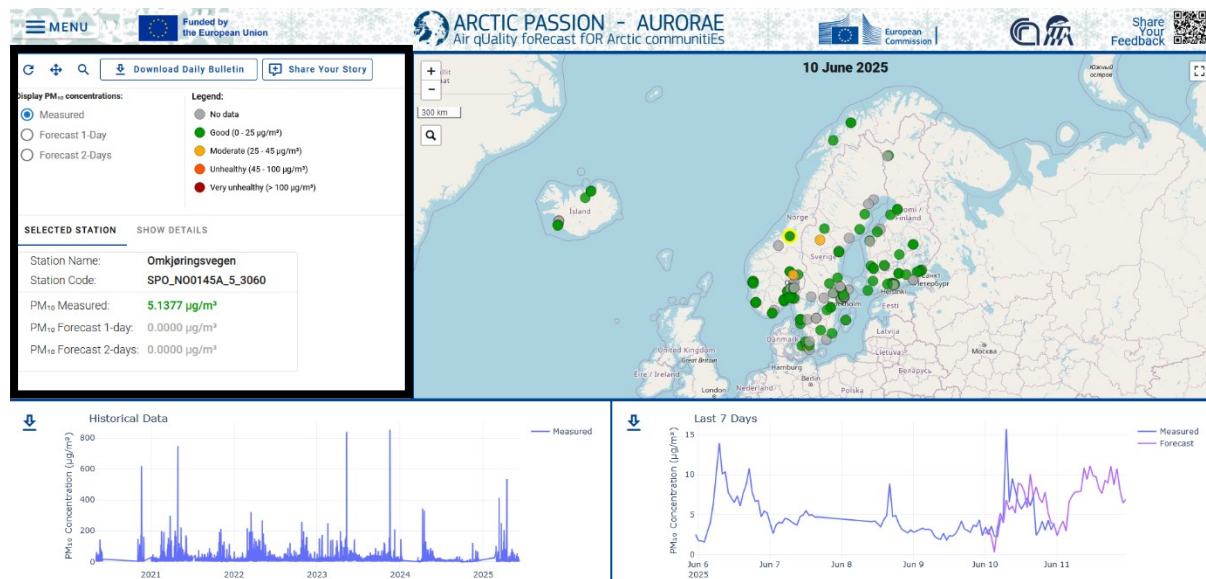
The map displays the European Arctic region with each dot representing a station where air quality is measured.

Finding Your Local Air Pollution Forecast

To find your relevant local air pollution forecast, you can:

- Zoom in on the map using the + and -  symbols.
- Click on the **search icon**  to search directly for a station.
- Continuously click on the map and move the mouse to pan across the region.

Exploring the data through the left panel



The left panel is a valuable resource that provides essential information to help you navigate and understand the air quality data. The following sections explain the key features of the left panel:

Legend

The Legend is a color-coded guide that indicates the level depending on PM₁₀ concentrations, ranging from:

- Green: Good (0 - 25 µg/m³)
- Orange: Moderate (25 - 45 µg/m³)
- Red: Unhealthy (45 - 100 µg/m³)
- Dark Red: Very Unhealthy (> 100 µg/m³)

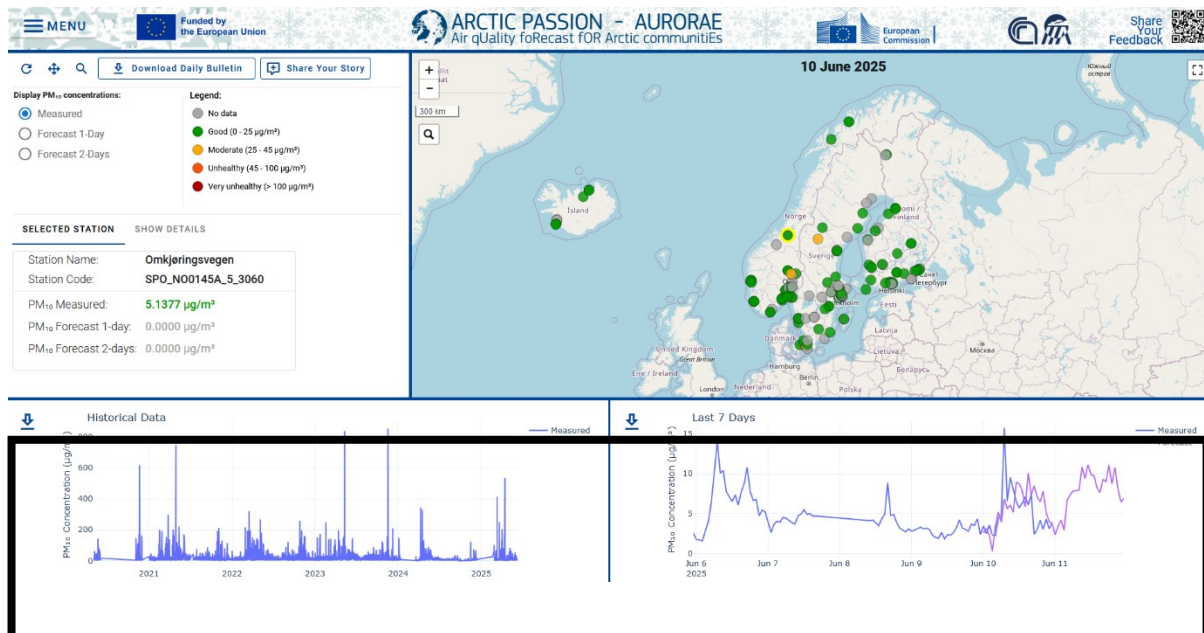
The colour gradients provide a visual representation of the air quality, making it easy to quickly understand the current conditions.

Display PM₁₀ Concentrations

Through this panel, you can select the time at which you want to look at the concentrations of PM₁₀: the near-real time (“**Measured**”), or the forecast for the next two days (“**Forecast 1-Day**”; “**Forecast 2-Days**”). The panel below display the measured and forecast mean daily concentrations for the selected station. The tab “**Show details**” allows a full exploration of the data in details.

Understanding the data in a graph form

- A simple click on each station dot on the map, will show two graphs in the bottom section of the web page: **Historical Data** and **Last Days & Forecast**.
- Below the map, you will find two graphs:
 - **Historical Data** (left): This graph shows the average monthly measured concentrations over the past years, providing a long-term view of air quality trends.
 - **Last Days & Forecast** (right): This graph displays the measured concentrations of the past four days and the current date (in blue), as well as the two-day forecast (in purple).



Interactive Graph Tools

When you move the mouse over the graphs, additional tools will appear at the top right of each panel, including:

- **Zoom:** Allows you to zoom in on a specific section of the graph.
- **Pan:** Enables you to move the graph horizontally or vertically.
- **Autoscale:** Automatically adjusts the graph's scale to make it more easily readable.
- **Download plot as a PNG**
- **Reset axes:** to re-adjust the axis after having zoomed the graph

These tools help you to customize the graph's display and gain a deeper understanding of the air quality data.

Download Data

Located at the top of the page, the 'Download Daily Bulletin' button allows you to download a detailed report of the concentrations and details on each station in a text (.txt) format. This report is easily accessible from any device, providing you with a convenient way to access the data on-the-go. The bulletin has a tabular structure and includes the following columns:

Station Code: Unique code provided by EEA or FMI to identify the monitoring station

Station Name: usually it is the name of the Municipality where the station is located

Country: the country where the station is located

Station type: this category is related to the main source of atmospheric pollution for the area e.g. traffic, background, industrial

Latitude and Longitude: geographical coordinates of the station

Network: monitoring network to which the monitoring station belongs to

PM₁₀ measured concentration (µg/m³): daily mean concentration measured yesterday by the monitoring station


PM₁₀ today forecast mean concentration (µg/m³): daily mean concentration forecasted by the AURORAE model for today at the monitoring station geographical position

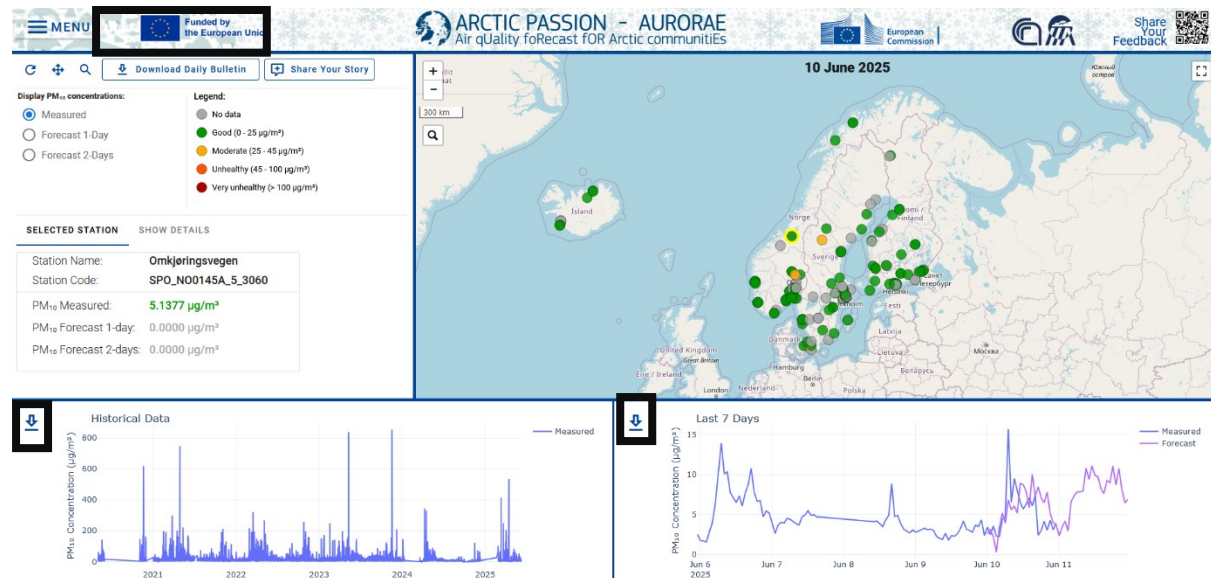
PM₁₀ tomorrow forecast mean concentration (µg/m³): daily mean concentration forecasted by the AURORAE model for tomorrow at the monitoring station geographical position

Today air quality: evaluation of the air quality status based on the legend

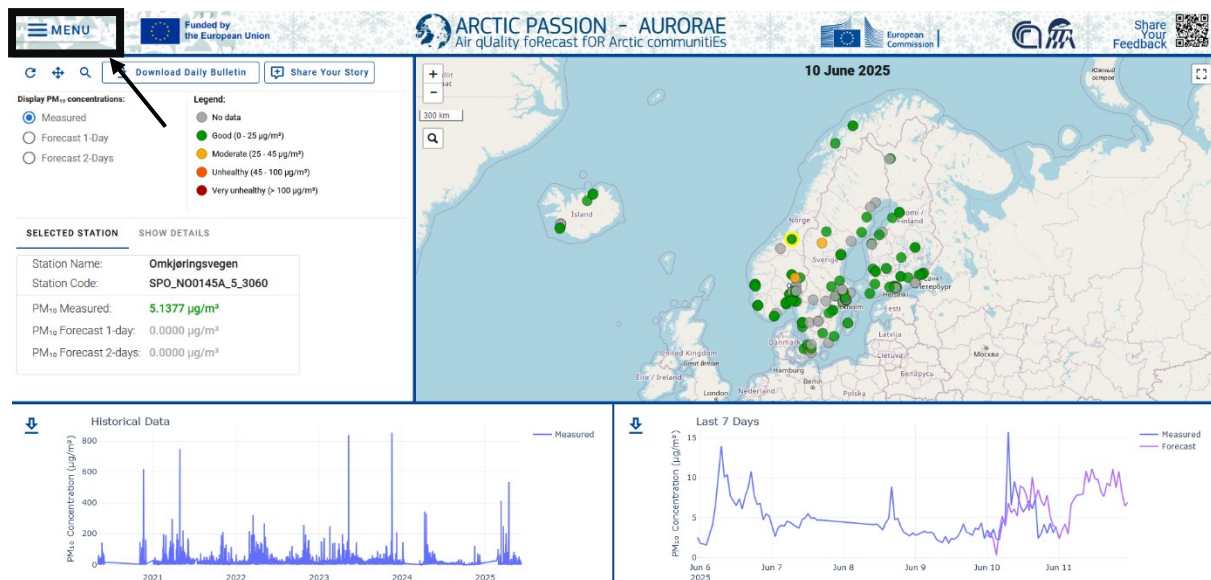
Tomorrow air quality: evaluation of the air quality status based on the legend

Actions: suggested actions to take in case of poor air quality

To download the Historical Data and Last Days, click on the arrow  Both of this graph can be downloaded by clicking on this icon.



Menu with additional information



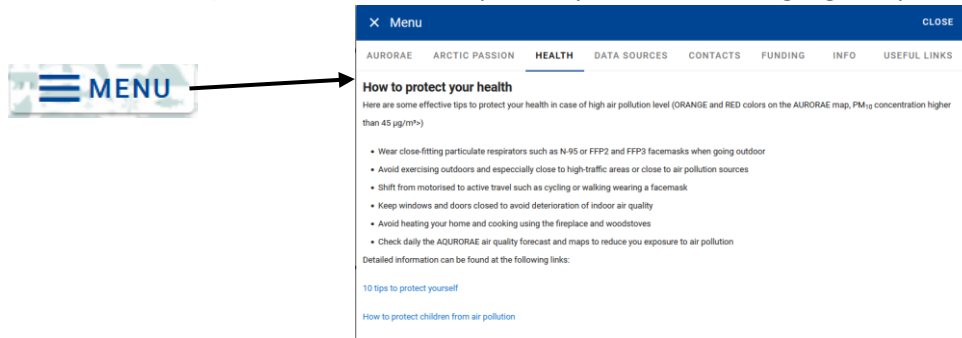
You can find the Menu with additional information at the top left of the screen, as shown in figure below. In this menu, you can explore:

- What is AURORAE and Arctic Passion in the tabs “AURORAE” and “Arctic Passion”
- Advices about protecting your health in the tab “Health”:
- Data sources
- Contacts of the creators of the service

- Funding sources, and publications associated with it
- Links to explore more on air pollution, PM₁₀, EU air quality standards & EU Clean Air Directive

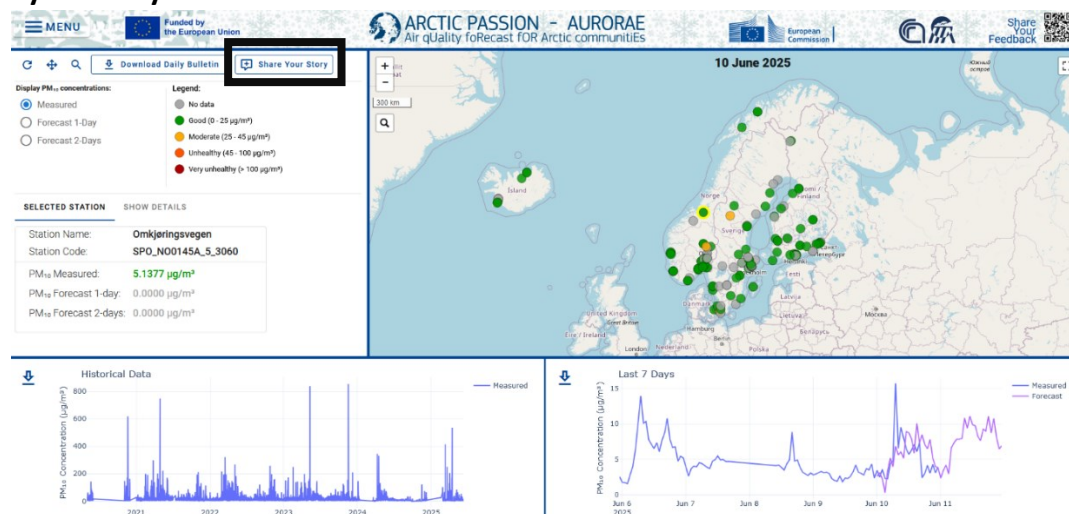
Health Advice

If the colour gradient ranges from orange to dark red, it is recommended that you explore the Health tab (see Section Menu) for advice on how to protect your health during high air pollution levels.



This section provides details and advices on what to do when the PM₁₀ concentrations are above healthy levels. Additional links can provide you more information on how to protect your health.

Share your story !



This link will allow you to write your story! This is an open space to talk about your community, your experience with air pollution and possible observations you made. We will collect all the contributions and publish them on the AURORAE website!

What do you think of AURORAE? Consider sharing your feedback by clicking on the QR code on the top right of the webpage!