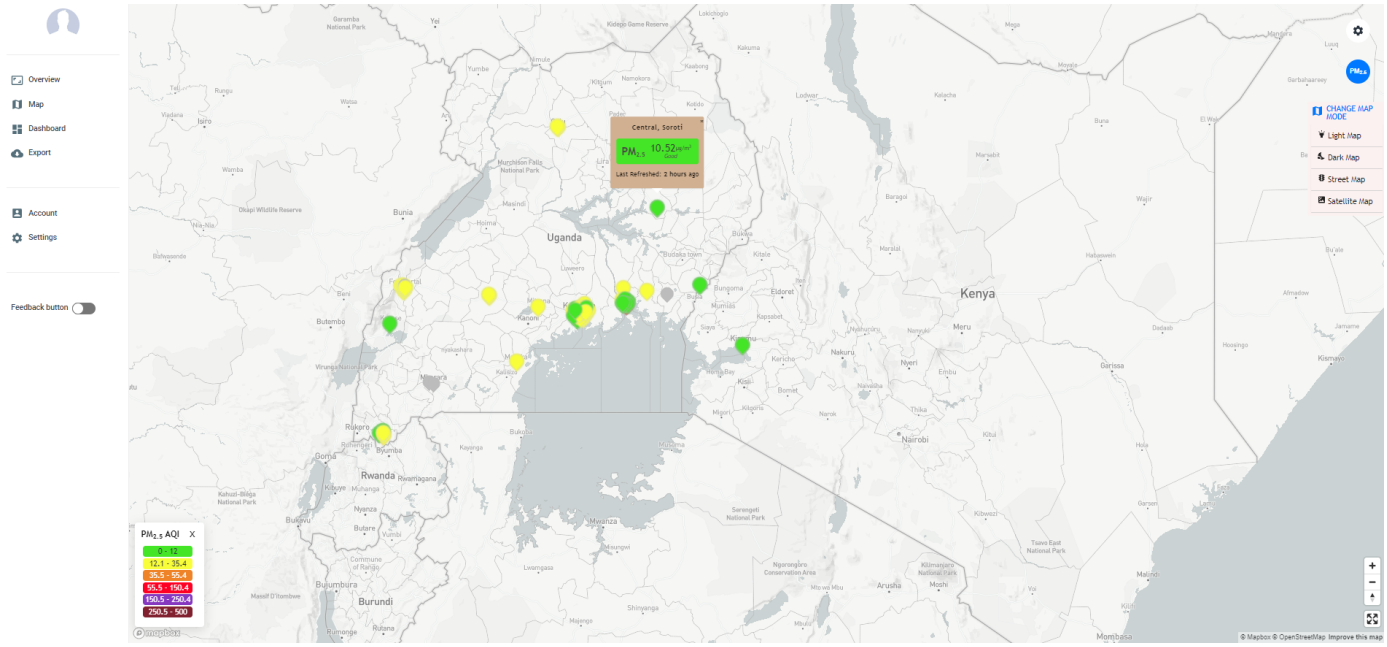
AirQo Air Quality Analytics Dashboard User Guide

The AirQo air quality analytics dashboard provides access to air quality information from low-cost air quality monitoring devices deployed across major African cities. The dashboard offers a wide range of features related to air quality monitoring, including:-

- ★ Map showing Air quality index in different locations where AirQo low cost devices and other reference devices are deployed
- ★ Mini dashboard for users to browse and analyze air pollutants concentrations based on the different deployed devices
- ★ Access to current and historical particulate matter ($PM_{2.5}$ and PM_{10}) concentrations as non-averaged, averaged hourly or daily data.

For a detailed guide on accessing and navigating the AirQo analytics dashboard, follow the steps below:

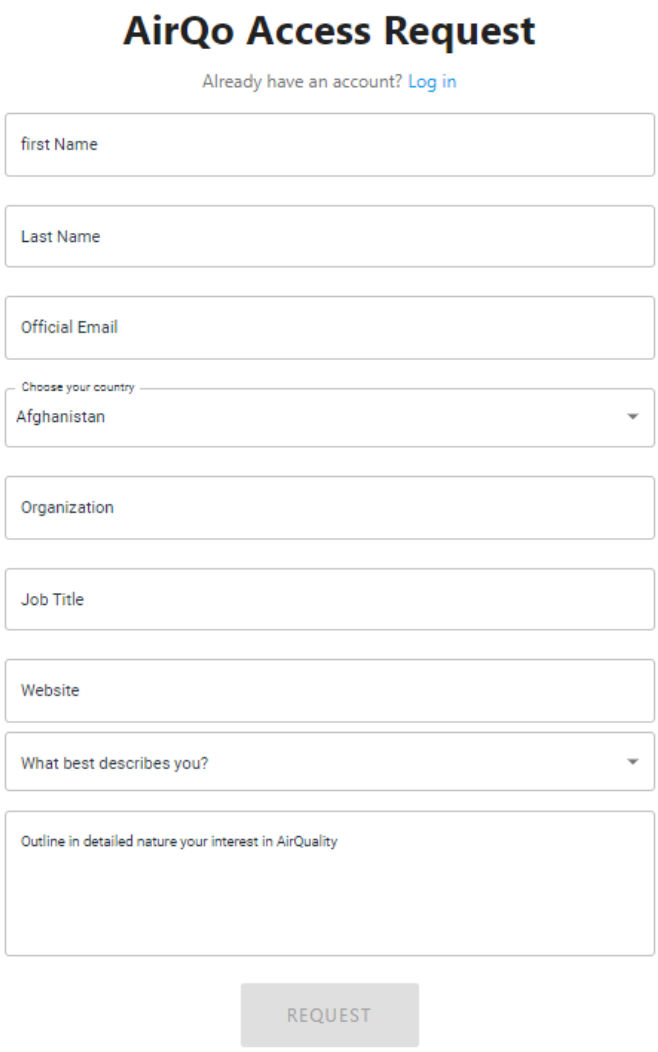
Navigate to the AirQo website and select **Explore data** followed by the **Air Quality Dashboard button**. This will take you to a page that features a map view of deployed AirQo air quality monitoring devices displaying the Air Quality index based on the location of deployment. You can select a sensor location to get more insights on air pollution in the area just as visualized below.



+ On the right-hand side of the map, there is a list of map mode options, a setting icon that enables you to toggle between Monitors, heatmap (predicted AQI) and whether or not to use calibrated or raw values for the visualization. Additionally, there is a circular shape with $PM_{2.5}$ which when clicked enables you to toggle between $PM_{2.5}$ and PM_{10}.

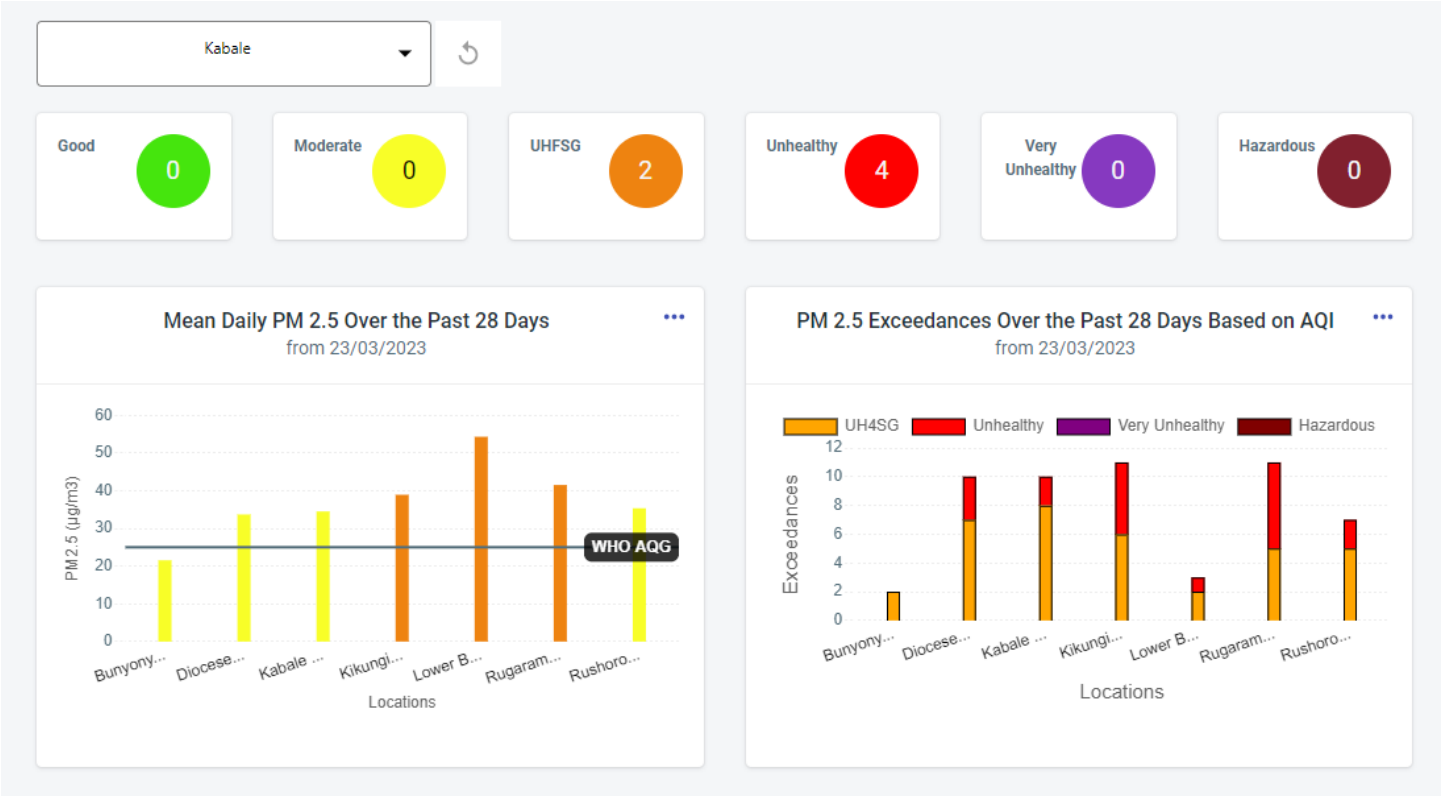
Overview of the Page features

On the left-hand side of the map, there is a list of features such as a dashboard and export. The dashboard allows deeper analytics such as comparing Air Quality between two devices from different locations while export allows you to download raw, hourly and daily data in JSON or CSV formats. To explore these features you will be required to sign in or sign up. The sign up/ AirQo data access request card is as visualized below.

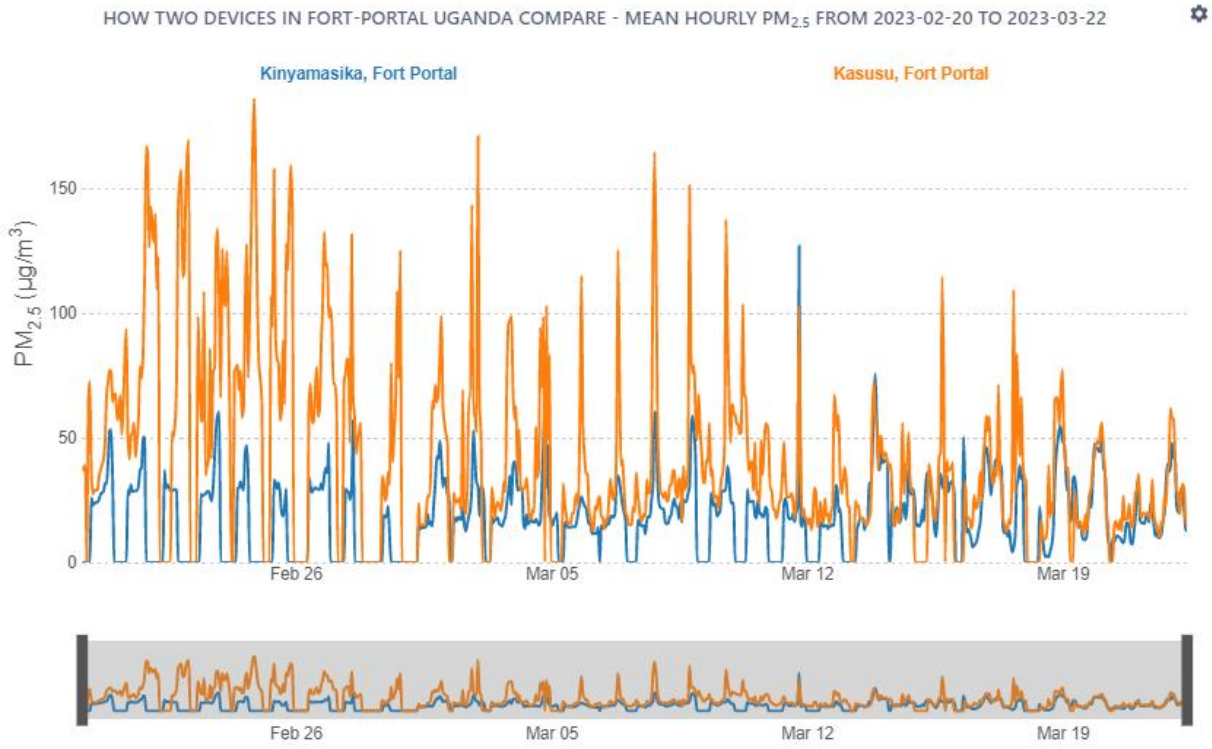


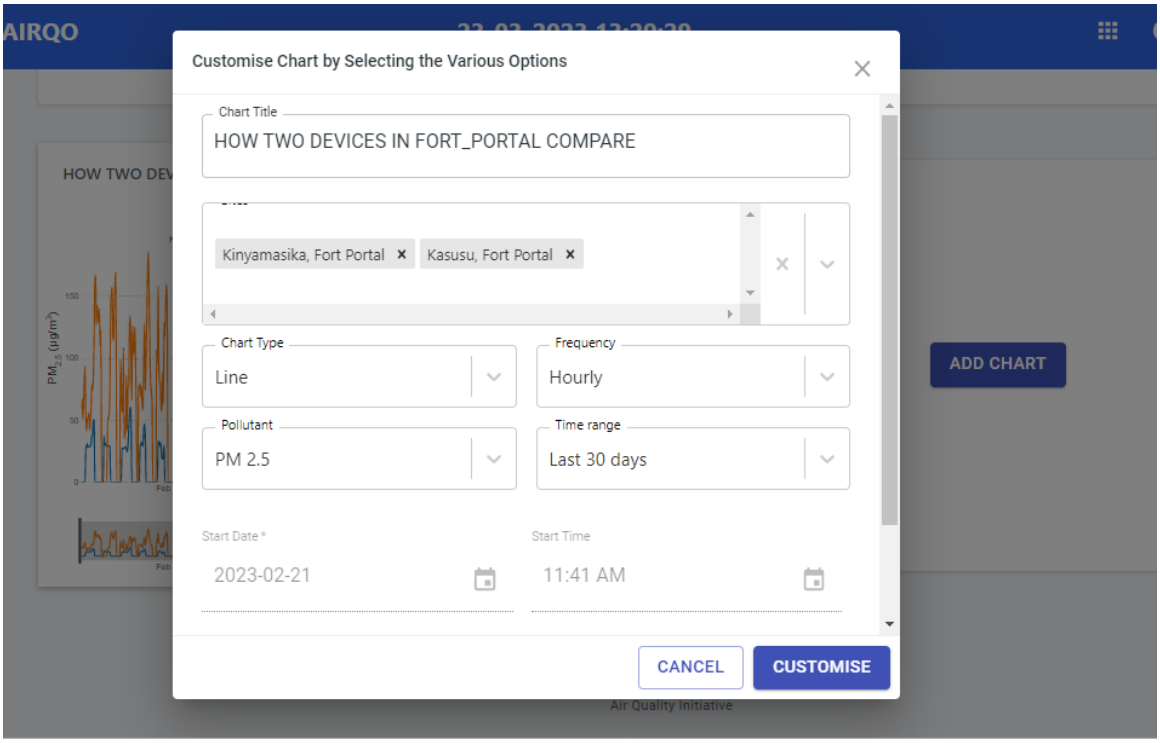
Dashboard Feature

On top of the dashboard card, there is a drop-down that enables you to choose which region or country whose air quality you are interested in analyzing. Upon choosing the region or country of interest, graphs for all devices within the selected region will be displayed showcasing the mean daily Air Quality index for each device over the past 28 days. The graph on the right represents the daily exceedances above the World Health Organisation (WHO) recommended pollution levels. These graphs can be exported by clicking on the three dots in the upper right corner.



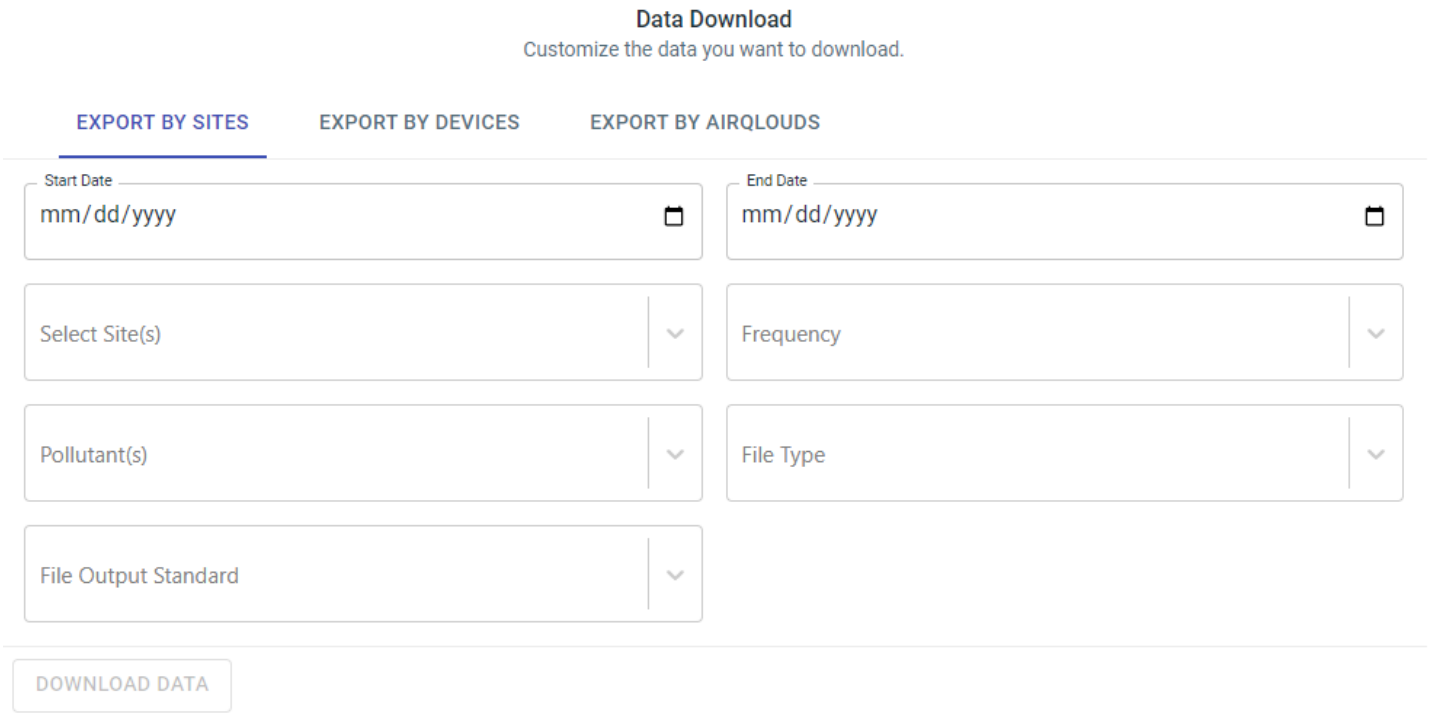
The dashboard feature also allows personalized analysis by the **ADD CHART** option for the user to compare their sites of interest. An example of a customized chart is shown below


HOW TWO DEVICES IN FORT-PORTAL UGANDA COMPARE - MEAN HOURLY PM2.5 FROM 2023-02-20 TO 2023-03-22
Kinyamasika, Fort Portal
Kasusu, Fort Portal
PM2.5 (µg/m3)
150
100
50
0
Feb 26
Mar 05
Mar 12
Mar 19


AIRQO
Customise Chart by Selecting the Various Options
Chart Title
HOW TWO DEVICES IN FORT_PORTAL COMPARE
Kinyamasika, Fort Portal
Kasusu, Fort Portal
Chart Type
Line
Frequency
Hourly
Pollutant
PM 2.5
Time range
Last 30 days
Start Date *
2023-02-21
Start Time
11:41 AM
CANCEL
CUSTOMISE
ADD CHART
Air Quality Initiative

Export Feature

The export feature allows you to download data from the platform in either CSV or JSON format with custom options of time, location, and date enabling you to download data for a specific time frame as hourly, daily or non averaged data. The export feature enables data download for a single device by device site or number with capabilities of downloading data for a group of devices/sites within a geographical boundary (AirQloud).



The export feature provides two standards namely AQCSV and AirQo standard. AQCSV stands for Air Quality Comma separated values and is a file format used to store air quality data in a tabulated format with each column representing a specific attribute.