



# THE GLOBE PROGRAM

Global Learning and Observations to Benefit the Environment

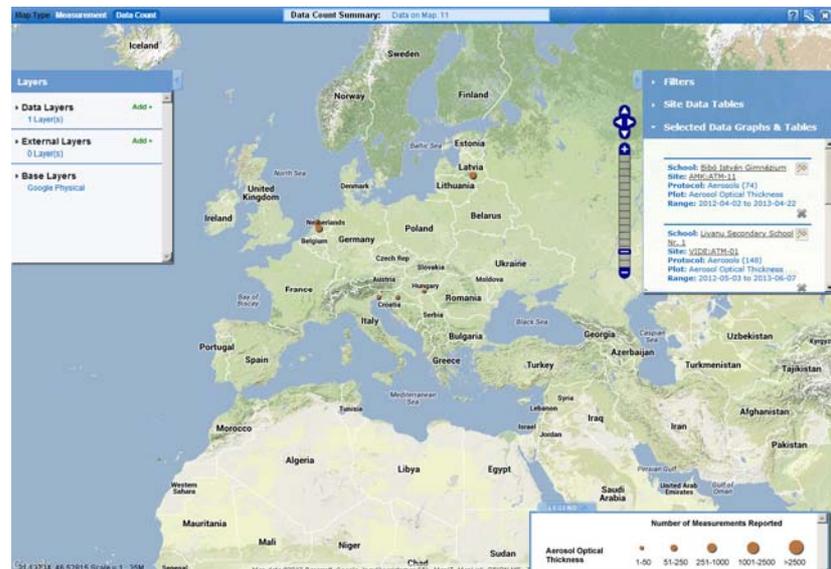
*Working with GLOBE Aerosols data on [www.globe.gov](http://www.globe.gov)*

## Visualizing GLOBE Aerosols data

The GLOBE data base allows the exploring of GLOBE project data from all attributing schools over the world. In this exercise we will use the GLOBE online visualization tool to look into GLOBE Aerosols data obtained in this year's spring measurement campaign.

- Go (back) to the visualization page: *Explore Science > Finding GLOBE data > Visualize GLOBE Data*
- In the top left corner you can choose the **Map Type** with options **Measurement** or **Data Count**. By default, the visualization tool is set to **Measurement** showing a visualization of data projected on the global map. Now, to be able to see, visualize and download your schools' data choose **Data Count** by clicking on the tab.
- Then, go to the **Layers** toolbox and add a Data Layer by first clicking on the **add+**. From the drop down menu choose the Aerosols from the Atmospheric protocols. Then choose **Aerosol Optical Thickness**.
- You will now see the total number of aerosol optical thickness data in the data base, visualized in accordingly sized circles, at all measurement site locations and over all years available.
- Zoom into the area over Europe by using the zoom togglebar.
- In the **Filters** toolbox (on the right), choose the measurement period of this year's spring measurement campaign, which was conducted from 1 March 2013 to 31 May 2013.
- The result is a map will all this year's aerosol optical thickness data, shown in **Figure 1**.

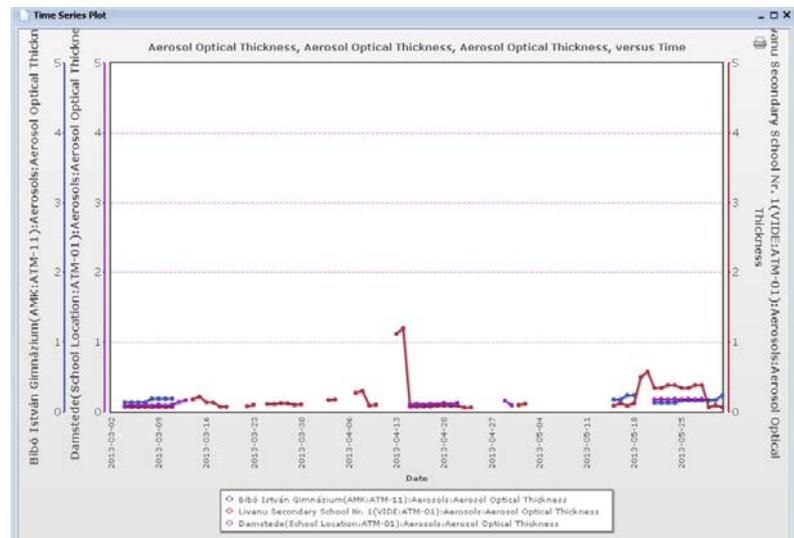
**Figure 1. Total data count of aerosol optical thickness measurements in Europe over the period 1 March 2013 - 31 May 2013.**



As an example, we further explore the aerosols optical thickness data obtained by the students from the following three schools: Damstede in Amsterdam, the Netherlands, Livanu Secondary School in Livani, Latvia, and Bibó István Gimnázium in Kiskunlas, Hungary.

- First, we need to select the data of all three schools. We start with the data obtained by the Damstede students. Therefore, go to the data count circles in Amsterdam area and click on the Damstede circle (zoom in if you need to be able to do so).
- A pop-up window now appears with measurement site information and data show options.
- Choose **Time Series Plot** from the **Obtain Data** options, **Aerosols** from the **Protocol (Total Measurements)** options. To view Aerosol Optical Thickness data from Damstede an click **aerosol optical thickness** check-box, then click on the graph icon to add the data to be selected for making a graph of the time-series.
- The selected data set will now appear in the dropdown toolbox **Selected Data Graphs and Tables** on the right.
- Repeat the same steps for Livanu Secondary School in Latvia and Bibó István Gimnázium in Hungary to add the data of these schools.
- Select the time period for the actual plotting of the time series by selecting the start and end date of the spring measurement campaign in **Plot Data Range** in the **Selected Data Graphs and Tables** toolbox.
- Finalize the graph by clicking the **Plot All** button. The graph with the aerosol optical thickness time series of each school as is shown in **Figure 2** appears.

**Figure 2. Aerosol optical thickness data obtained by students from Damstede (the Netherlands), Livanu Secondary School (Latvia) and Bibó István Gimnázium (Hungary) for the period 1 March 2013 - 31 May 2013.**



- To view the data in a table click on the **View Plot Data** button. To download the data click on **export.csv** in the bottom left corner of the data table that has popped up. This allows you to process the data offline using your own preferred data processing/visualization program (with for example MS Excel).

You are now ready to start your own science!