

#### What is GLOBE Data and how can I use it?

Over its 25+-year history, The GLOBE Program has amassed a rich set of global environmental data that spans over 40 scientific protocols across 125+ countries. GLOBE data are freely available to all members of the public. There are several ways educators, students, researchers, and citizen scientists can retrieve GLOBE data from the GLOBE website.

Educators	Students	Researchers	Citizen Scientists
Enter, retrieve and use GLOBE data in and outside of the classroom to answer questions abou tthe local and global environment.	Enter, retrieve and use GLOBE data for student research projects, such as local science fairs/symposia or the GLOBE International Virtual Science Syposium (IVSS).	Enter, retrieve and use GLOBE data to supplement your research endeavors and access data from across 125+ countries.	Enter, retrieve and use GLOBE data to learn more about changes in your community and local environment.

### **How can I enter GLOBE data?**

### There are several ways to enter scientific measurements to GLOBE's database via:

- ► GLOBE Desktop forms
- ► GLOBE Email Data Entry
- ► Publications by Scientists

All methods require a GLOBE account, except if using the GLOBE Observer app, which only requires a GLOBE Observer account (citizen scientists) to enter data directly in the app for the following protocols: Clouds, Mosquito Habitat Mapper (MHM), Land Cover, and Trees.

GLOBE Desktop Forms	GLOBE Email Data Entry	GLOBE Observer App
GLOBE trained users can use these forms for entering data for all of GLOBE's 40+ protocols into the GLOBE database. These forms can be displayed on desktop computers, laptops and mobile devices.	GLOBE account holders can upload scientific measurements and observations for all of GLOBE's 40+ protocols via email messages that follow a prescribed format.	GLOBE Observer App: GLOBE trained users can use the application for entering data for all of GLOBE's 40+ science protocols into the GLOBE database via their mobile devices.

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## How can I retrieve GLOBE data?

#### Open and full sharing of all science data and research

The GLOBE Program, in accordance with NASA policy, promotes the full and open sharing of all science data with research communities, private industry, academia, and the public. A GLOBE account is not required to access GLOBE observation data. GLOBE data may be viewed and downloaded from the GLOBE database via:

- ► Application Programming Interface (API)
- ► Advanced Data Access Tool (ADAT)
- ► GLOBE's Visualization Tool (VIS)

GLOBE API	GLOBE ADAT	GLOBE VIS Tool
This tool supports developers who would like to retrieve GLOBE data from a programmatic interface. The API provides fast access to GLOBE data through a variety of API calls including the ability to find data by protocol, date, latitude/longitude, country, and more.	This tool gives users the capability to find and retrieve GLOBE data using different search parameters. Users can select from a variety of GLOBE sites that have data available based on the selected search parameters. Users may further refine search parameters and/ or download the data into a CSV file for detailed analysis. A summary CSF file is also available for each site.	and interact with data measured across the world. Select the visualization tool to map, graph, filter and export data across all applicable GLOBE protocols.

# How can I share a GLOBE-related publication?

We encourage you to submit your conference paper, peer-reviewed journal article or book chapter using or referencing GLOBE data, to the GLOBE Publications database.

- ► Submission process: Contact the GLOBE Science Team (globescience@ucar.edu) or the GLOBE Help Desk (globehelp@ucar.edu) if you have any questions about the submission process.
- ► How to cite GLOBE data: GLOBE Learning and Observations to Benefit the Environment (GLOBE) Data, <GLOBE Data Access Tool used>, <Date of Accessed data>, globe.gov
- ▶ Learn more about how to enter, retrieve and use GLOBE data: Check out the GLOBE Data User Guide