National Aeronautics and Space Administration

GLOBE

Global Learning & Observations to Benefit the Environment

https://globe.gov and https://observer.globe.gov

@NASAGO

GLOBE Data Fundamentals: Training 1

October 31, 2019

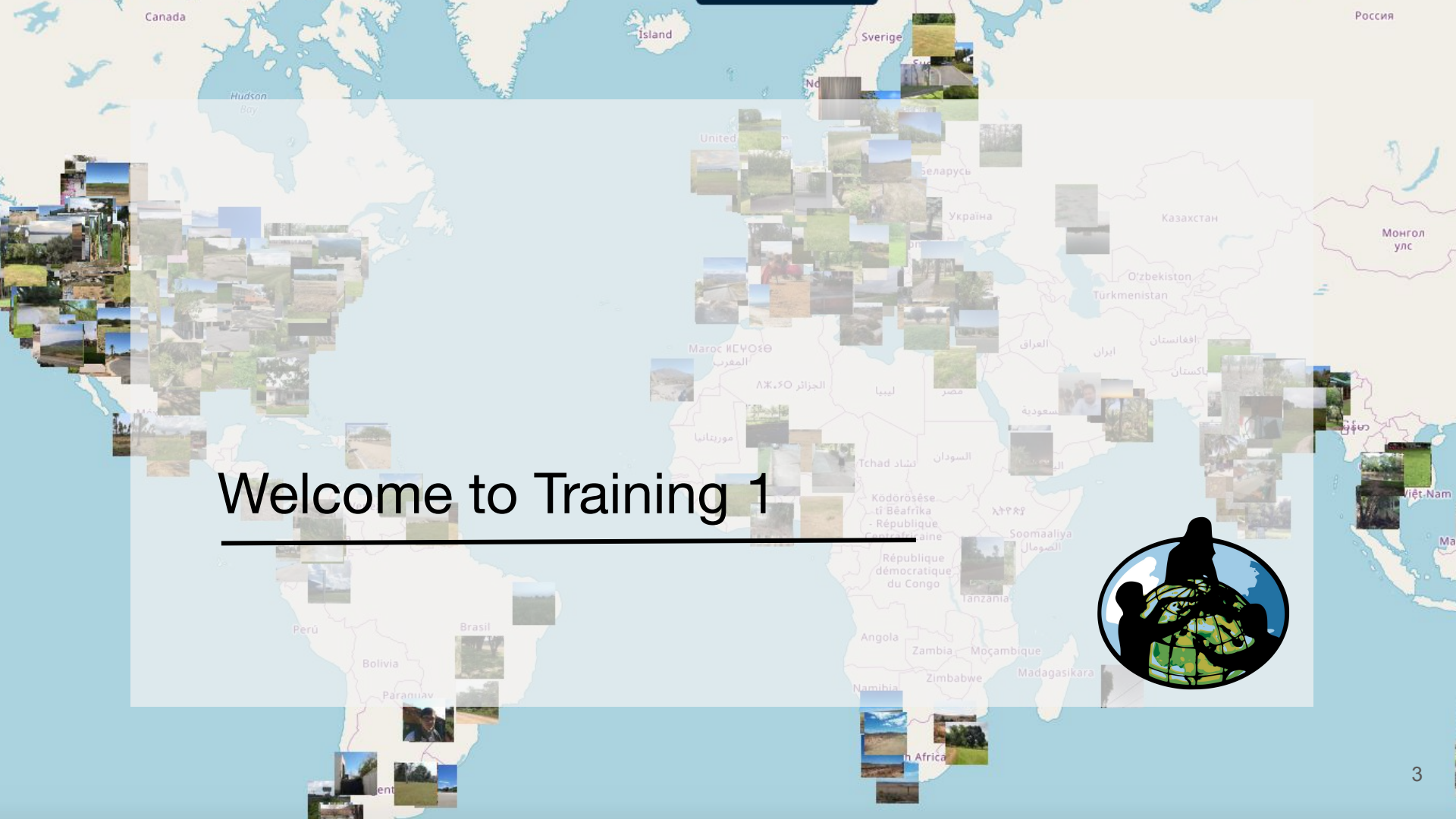
Questions? help@globe.gov

THE GLOBE PROGRAM

Training Mission Statement

To increase the use of GLOBE data by scientists for research. This is accomplished through online training that teaches participants how to access, visualize, and analyze GLOBE data.

Welcome to Training 1



Prerequisites

There are no prerequisites.

This training assumes no prior knowledge of GLOBE.

Learning objectives

Training 1 will answers the following:

What is GLOBE?

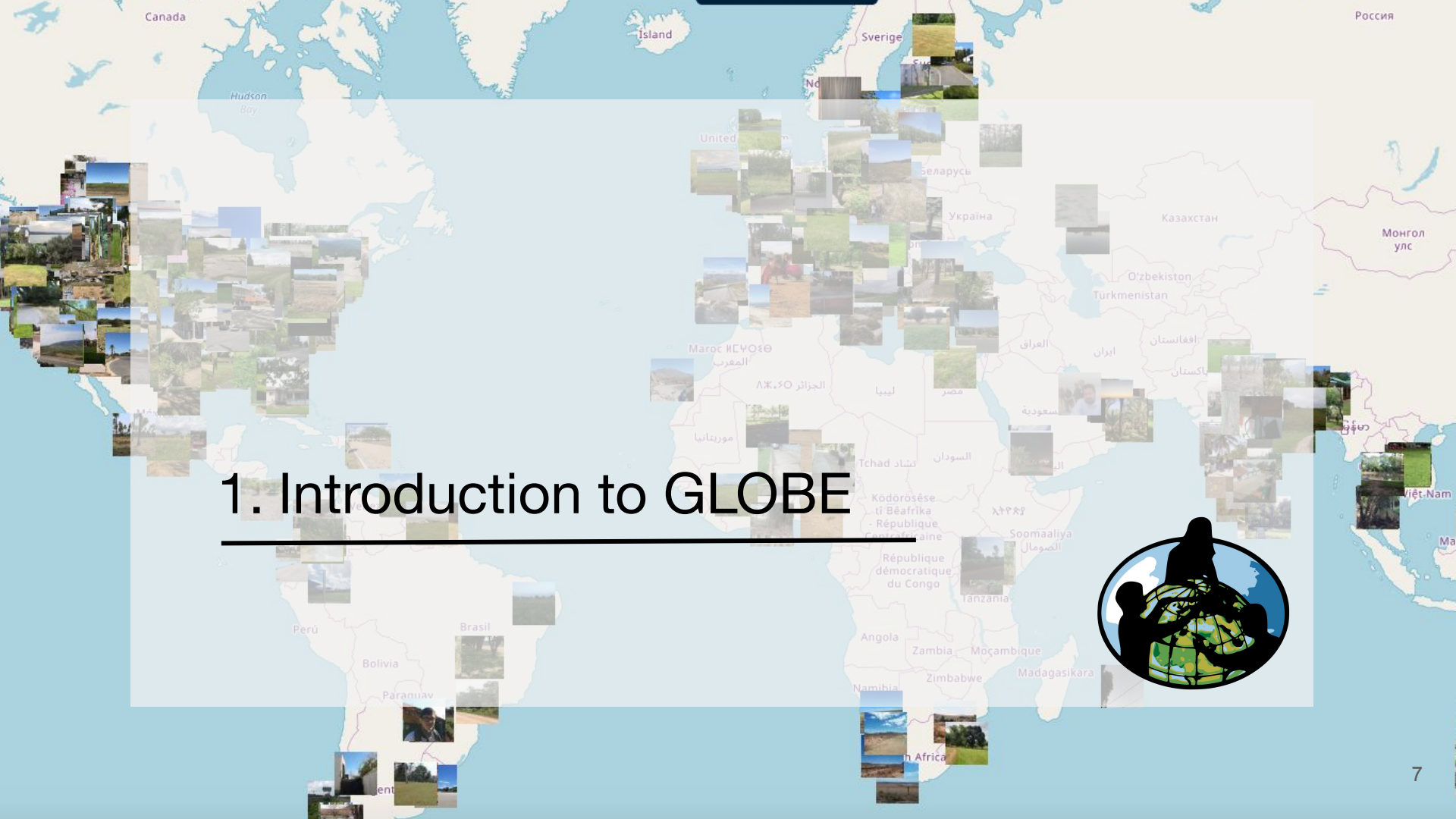
What data are available?

How do I get the data?

Outline

1. Introduction to GLOBE
2. Data Collection
3. Data Access
4. Data Documentation
5. Summary

1. Introduction to GLOBE



GLOBE Program

Global **L**earning & **O**bservations to **B**enefit the **E**nvironment (GLOBE)

Sponsored by: Supported by: Implemented by:

GLOBE by numbers

Since 1995

121 countries

34,000 schools

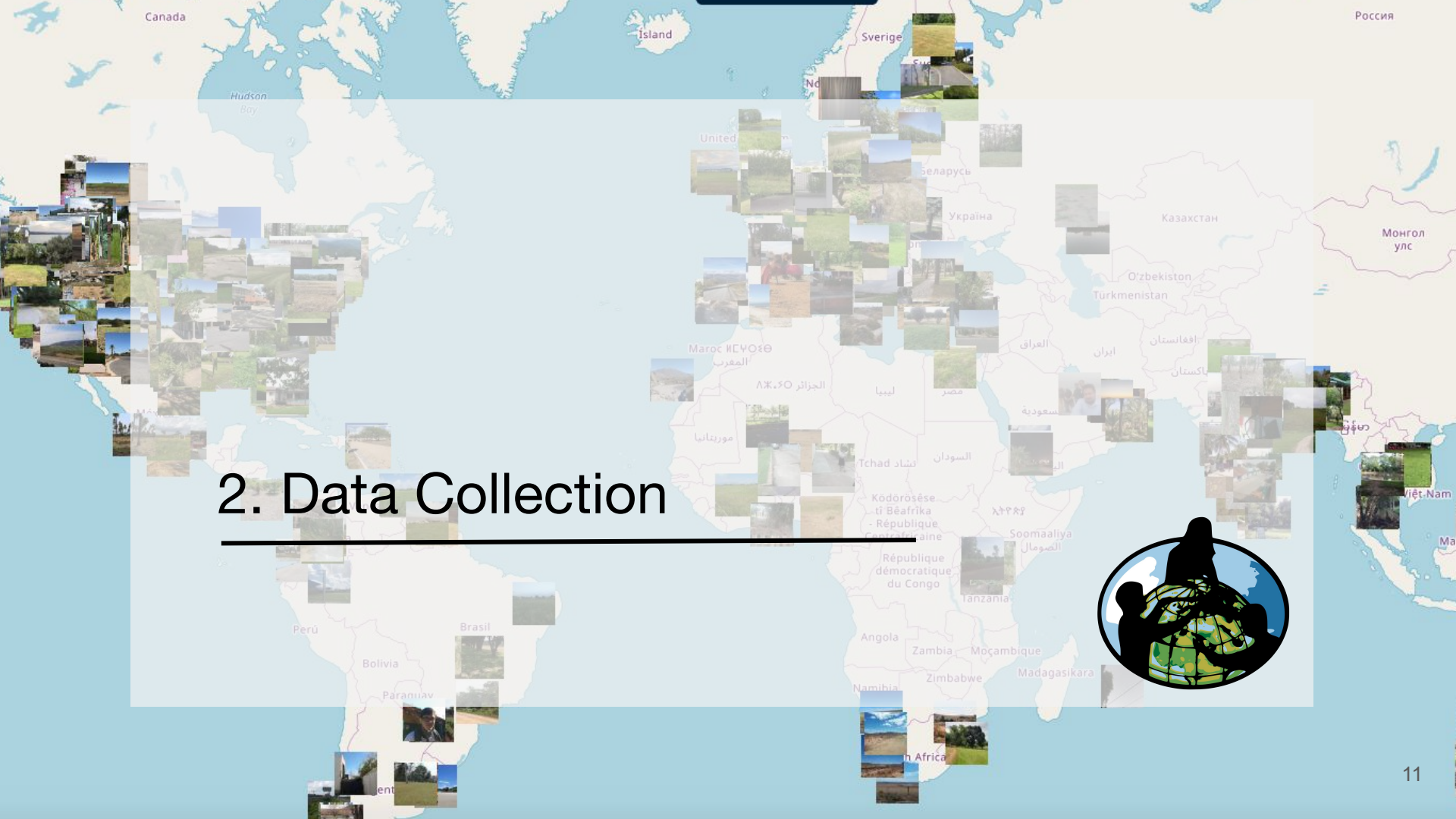
142,000 citizen scientists

23rd GLOBE Annual Meeting, Detroit, Michigan, USA, July 2019

GLOBE countries

https://www.globe.gov/globe-community/community-map

2. Data Collection



Who is collecting data?

Teachers & Students

Citizen Scientists

GLOBE protocols for data collection

Water

Alkalinity
Conductivity
Dissolved Oxygen
Macroinvertebrates
Mosquitoes
Nitrate
pH
Salinity
Temperature
Turbidity

Biosphere

Biometry
Tree Height
Carbon Cycle
Green Up
Green Down
Land Cover
Lilac Phenology
Pheno. Gardens

Soil

Bulk Density
Particle Size Dist.
pH
Soil Characterization
Soil Fertility
Soil Moisture
Temperature

Air

Aerosols
Clouds
Pressure
Precipitation
Relative Humidity
Surf. Temperature
Temperature
Water Vapor

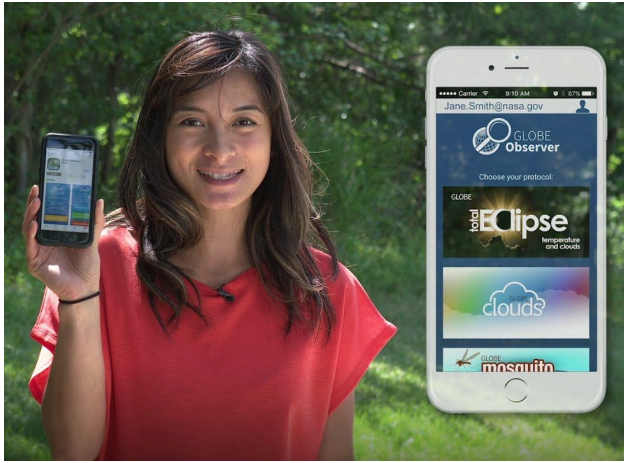
https://www.globe.gov/en/do-globe/globe-spheres

How are data collected?

Automated Weather Station

Manual

Mobile app



GLOBE Observer app

Download on the App Store

GET IT ON Google Play

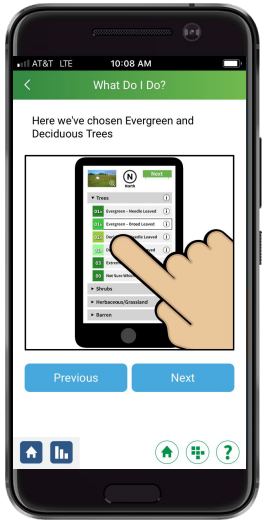
THE GLOBE PROGRAM

Training

In-Person

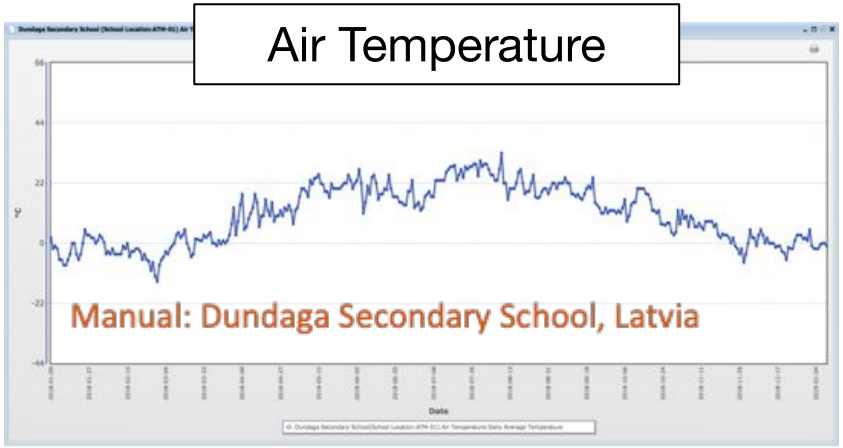
Online

In the app

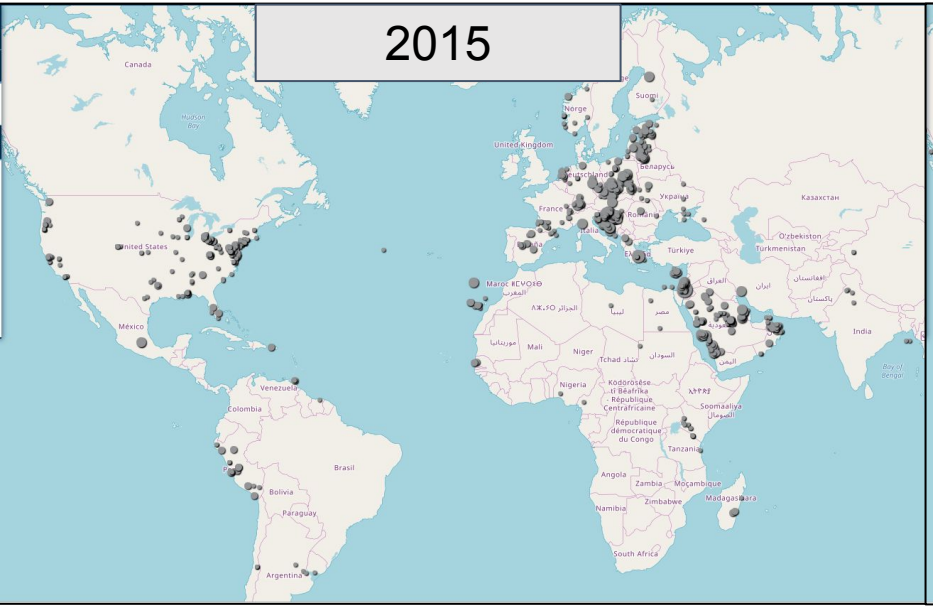


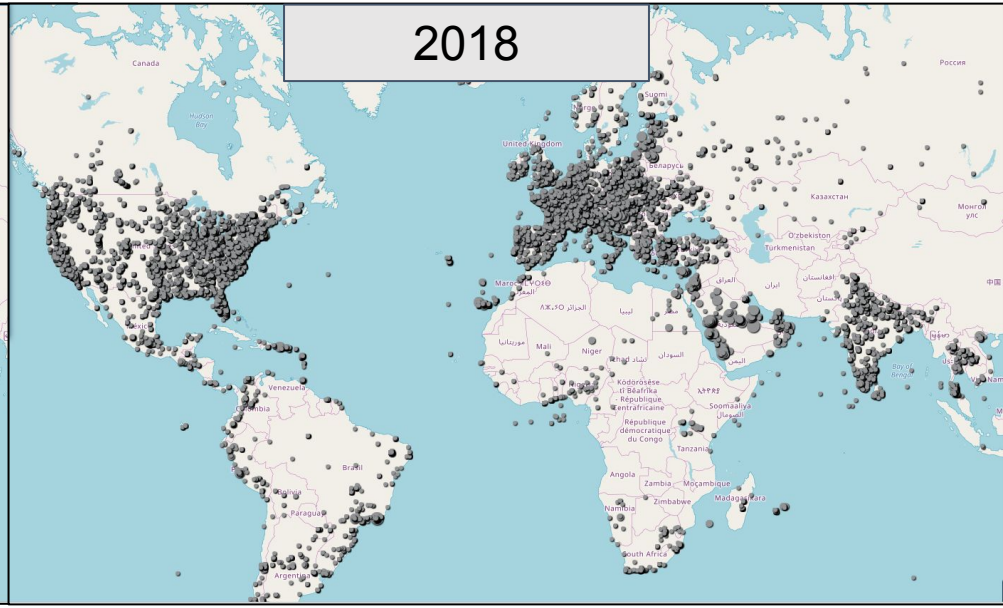
https://www.globe.gov/get-trained

What kinds of data are collected?



Impact of mobile app on data coverage





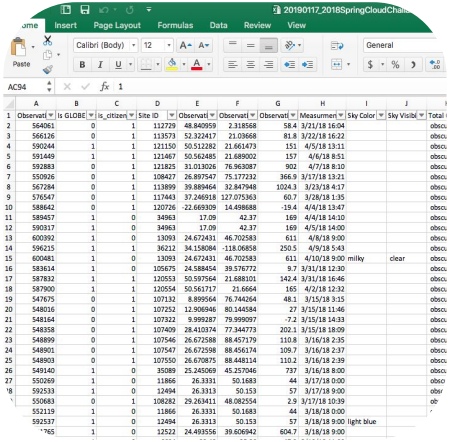
3. Data Access

Accessing GLOBE data

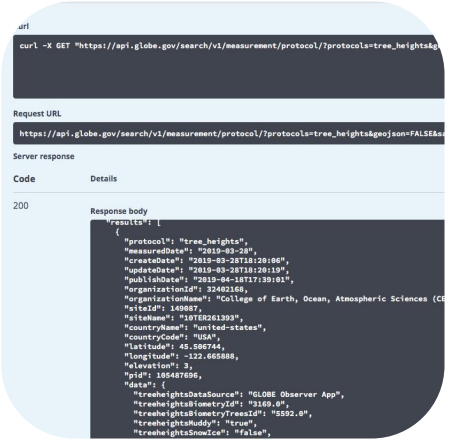
GLOBE data are all made freely available to everyone: globe.gov/globe-data

Map It

Spreadsheet



API



4. Data Documentation

Citation

Global Learning and Observations to Benefit the Environment (GLOBE) Program, *Date Data was Accessed*, https://www.globe.gov/globe-data

User Guide

The purpose of the GLOBE Data User Guide is to help scientists and researchers understand, access, and use available GLOBE data.

PDF available at globe.gov/globe-data/globe-data-user-guide

Reporting issues in the data

Users are encouraged to report errors or inconsistencies they discover in GLOBE data. Please report issues to help@globe.gov and include the following information in your email:

- Your name
- Your organization
- Your contact information
- Brief description of how you are using GLOBE data
- Date (approximate) issue was discovered
- Description of the issue

5. Summary

Summary

GLOBE is a worldwide community of students, teachers, scientists, and citizen scientists

GLOBE data are all made freely available to everyone

Data are available at globe.gov/globe-data

Download the GLOBE Observer app at observer.globe.gov

Stay connected with GLOBE

Join our listserv for scientists and researchers using GLOBE data
https://lists.nasa.gov/mailman/listinfo/go-sci

@GLOBEProgram and @NASAGO

@TheGLOBEProgram and @nasa.globeobserver