Introducing the User Guide for GLOBE Data

Report Out

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THANK YOU

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What is it?

Purpose:
The User Guide is a technical document intended to help scientists and researchers understand, access, and use available GLOBE data
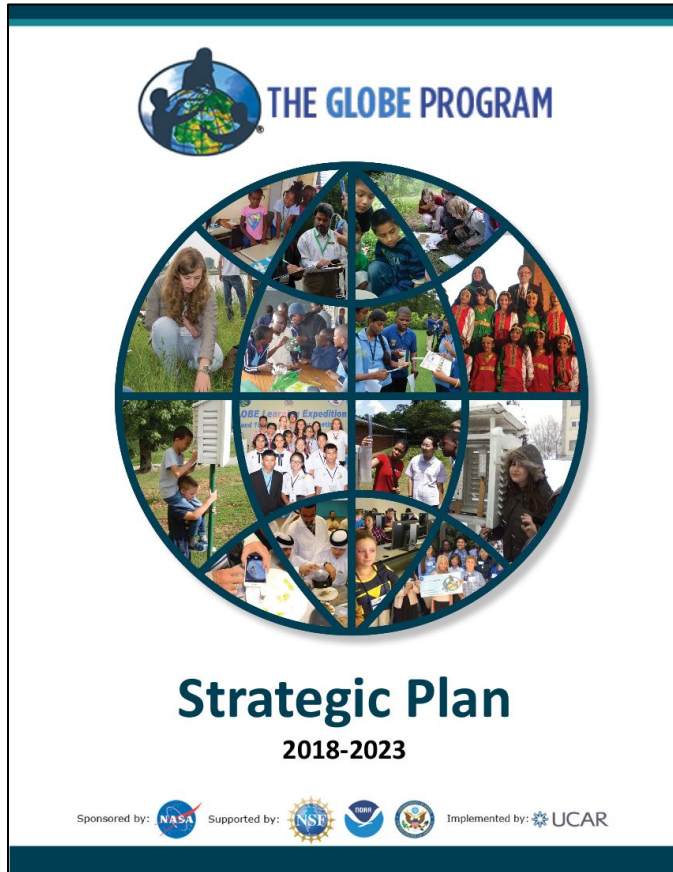
Audience:
Scientists and researchers using GLOBE data

Update schedule:
Annually (approximate)

Why?

Science Goal 3
Increase the number of
publications and citations using
or referencing GLOBE data

https://www.globe.gov/about/strategic-plan

Reactions

"This is AMAZING!!!"

"[This] document is fabulous"

"THANK YOU for your work on this. I'm really pleased to see significant progress on enhancing the ability of the science community to use GLOBE data."

"We need this."

What's in it?

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Citation for GLOBE Data

Data Characteristics

Data Variables & Metadata

Methods & Materials

Quality Assurance

Terms of Use

Report Issues

Data Visualization

Data & Photo Access

Example Data

Appendix 1. API Metadata

Appendix 2. Data Variables, Units, & Definitions

Appendix 3. MUC Code Derivation

What's in it?   Example 1

Table of GLOBE data variables

Variable	Units	Definition
org_name		The name of the reporting school or other institution.
latitude	decimal degrees north	The latitude of the site where data were observed. Range: [-90, 90]
longitude	decimal degrees east	The longitude of the site where date were observed. Range: [-180, 180]
elevation	meters above sea level	The elevation of the site where data were observed
aerosols:aerosol_optical_thickness	unitless	Aerosol optical thickness per wavelength for each time stamp

What's in it?   Example 2

Range & logic checks

Time of Measurement:						
Entry	**Min**	**Max**	**Units**	**Missing**	**Data Type**	**Notes**
*Year	1995	Current Year	None	N/A	Date	
*Month	January	December	None	N/A	Date	
*Day	1	31	None	N/A	Date	
*Time Hour Minute Second	0 0 0	23 59 59	None	N/A	Date	UT

Other Checks:
- Cannot be a future time

https://www.globe.gov/web/guest/do-globe/globe-teachers-guide/data-validations

What's in it? Example 3

Derivations from GLOBE Observer app
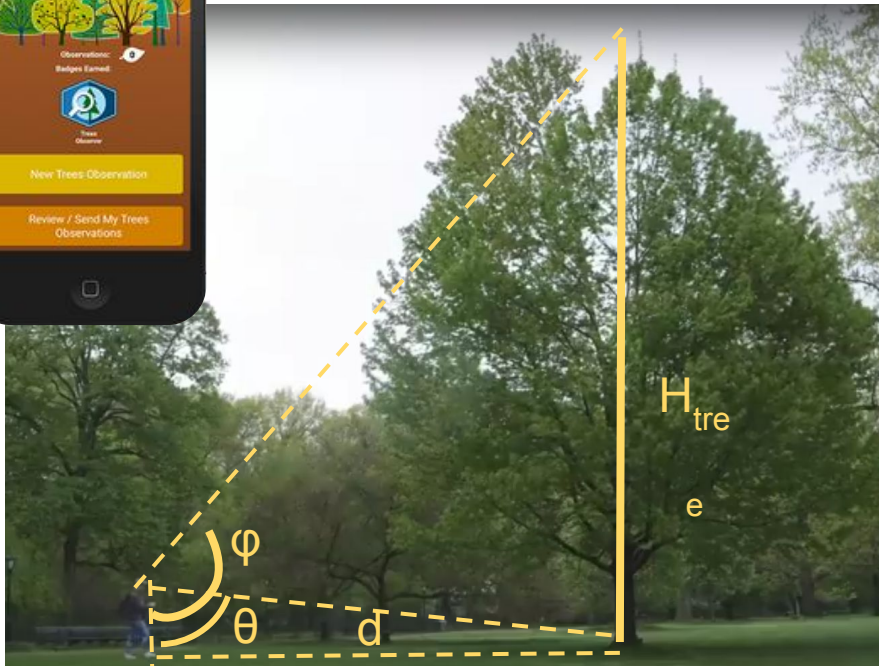
$$\varphi = radians(90 - \beta)$$

$$\theta = radians(90 - \alpha)$$

$$\lambda = arctan(h_c/(nL)) - \varphi$$

$$h_1 = tan(\theta)$$

$$h_2 = tan(\varphi)$$

$$d = nLcos(\lambda)$$

$$H_{tree} = d(h_1 + h_2)$$

Watch full video from *The Verge* [link]

Where is it?

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How can you contribute?

Suggested updates, additions, edits, and corrections are welcome. Email help@globe.gov with:

- Suggested change (please be as specific as possible)
- Rationale
- Version number
- Section
- Page number
- Your name
- Email address
- Date
- How are you using GLOBE data?

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