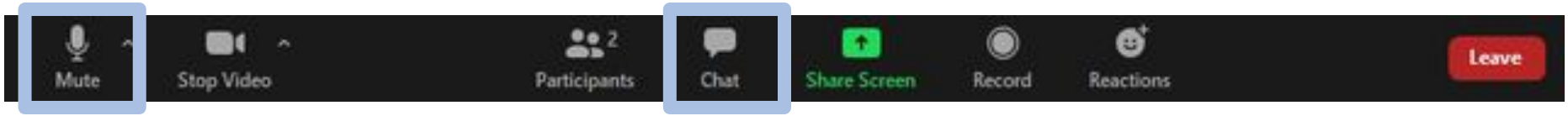
Welcome to the IVSS Badges Overview Webinar!

Please share where you are joining us from in the chat.

During the webinar:

- Please keep your microphone muted
- Use the chat to ask questions!



This meeting is being recorded and will be posted on the IVSS webpage later today. Thank you for joining us!

GLOBEPROGRAM®

2025 GLOBE International Virtual Science Symposium (IVSS)

Webinar #5: 2025 IVSS Badges Overview

www.globe.gov/news-events/meetings_symposia/virtual-conferences

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GLOBEPROGRAM®

2025 International Virtual Science Symposium (IVSS)

30 Years of GLOBE: Understanding the Past, Present, and Future

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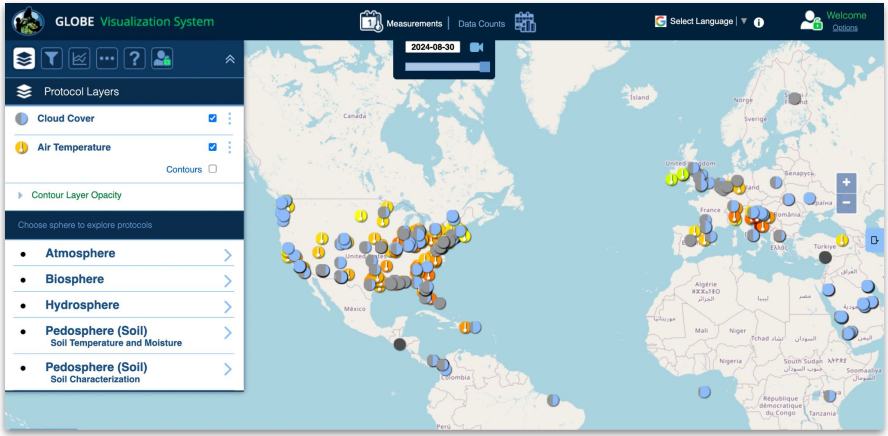
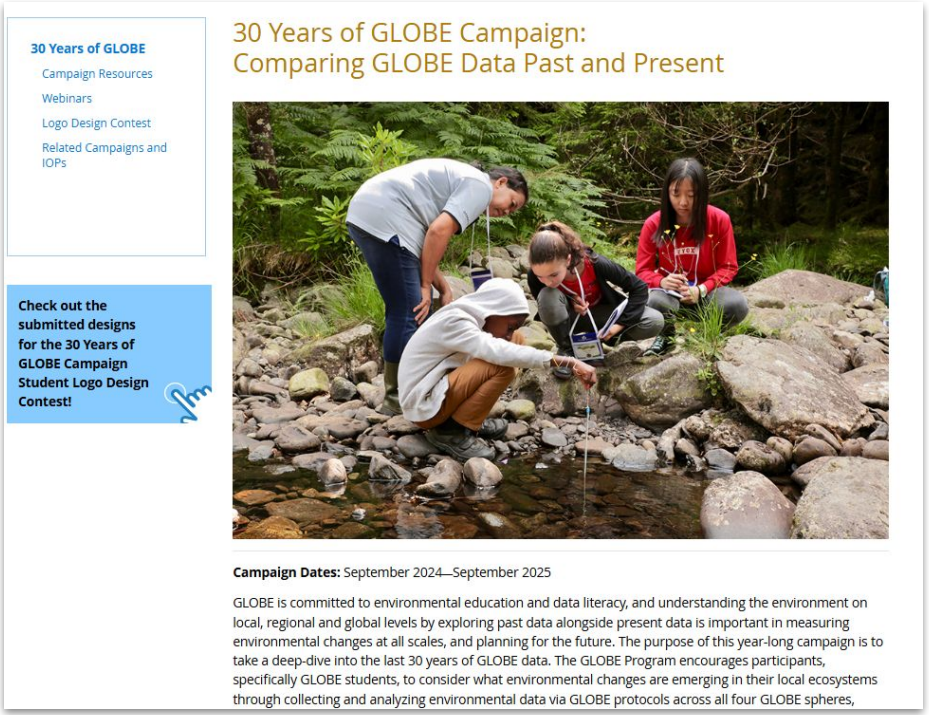
Celebrating GLOBE's 30th Anniversary

- Access and analyze data from the GLOBE database to enrich your understanding of Earth system processes
- Compare past GLOBE data to newly collected data, if new data are collected
- Data analyzed can be from any time period, region, or any length of time
- Submit your data to the GLOBE database!





https://www.globe.gov/web/30-years-of-globe-campaign/overview

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2025 IVSS Timeline

05 December - 05 March 2025: Reports Accepted

November - January 2025: Judge Recruitment

19 March 2025: Judging Webinar

19 March - 02 April 2025: Judging Period

22 April 2025: Earth Day Celebration, Feedback to Students and Stipend Drawing

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Project Requirements

This is what you will need in order to be considered in the IVSS judging process.

Most important: projects must include GLOBE data!

- Abstract/Summary
- Research report
- Appendix with data downloaded from GLOBE database*
- Explanation for each badge
- Presentation
- Photo release forms

* Required to earn the “I am a Data Scientist” badge

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Earth Day Stipend Drawing

- Projects that meet the following criteria will be entered into the stipend drawing:
  - Earn 4-stars on IVSS Research Project
  - Earn the featured badge for 2025: “I am a Data Scientist”
  - Receive at least two additional badges

- Student teams selected as stipend recipients are invited to attend the GLOBE Annual Meeting Student Experience where they present their work and engage in a GLOBE field experience with students, scientists, and STEM professionals from all over the world (max 4 students per team).

- Stipend funds can be used to help offset the cost of attending the 2025 GLOBE Annual Meeting in July, held in the USA.

IVSS Badges

“ I am a Student Researcher” Badge

- All scored projects will receive this badge
- Students earn 1-4 stars on their projects and receive the respective badge

“I am a Data Scientist”: Featured Badge for 2025

- Students must access and analyze historic data from the GLOBE database, in addition to newly collected data, as part of their 2025 IVSS project to be eligible for the stipend drawing

Additional Science Badges

- Students need to choose to apply for these badges when uploading a project
- Students should describe how each badge was earned in their report
- Students can earn up to 3 out of 8 additional badges
- **Minimum of two additional awarded badges are required to be part of the stipend drawing, including the “I am a Data Scientist” badge**

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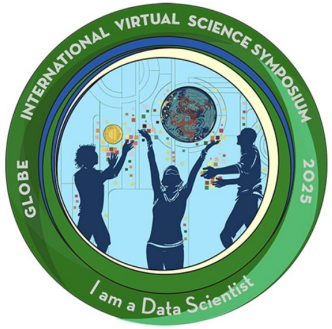
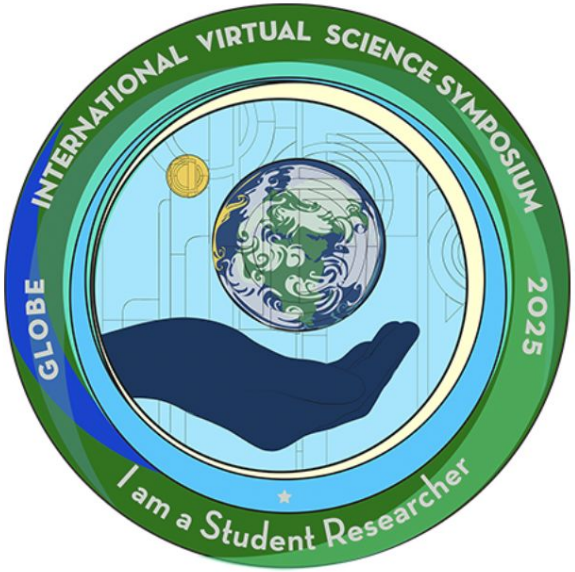
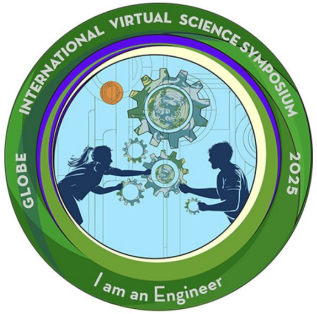
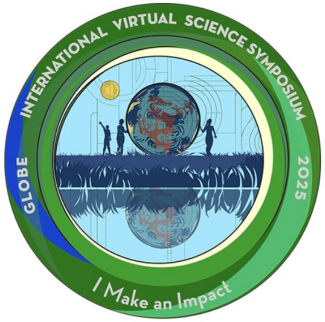
Students earn various badges by describing the scientific and engineering practices they engage with in their research projects.









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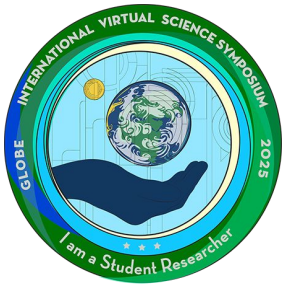
“I am a Student Researcher” Badge



1 Star Project - Insufficient

The report is missing significant information or does not contain all five required elements*.

2 Star Project - Needs Improvement

Report may be incomplete and need additional clarification or be missing one or more of the required elements*.

3 Star Project - Good

Report contains all required elements and is written clearly, but could need a bit more information or explanation.

4 Star Project - Exceptional

The report goes above and beyond the expectations of this project and is clear and concise.

*Minimum Report Requirements: Title, Abstract, Research Questions, Research Methods, and Conclusion
https://www.globe.gov/news-events/meetings_symposia/virtual-conferences/how-projects-are-judged

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New Badge for 2025: “I am an Earth System Scientist”

I am an Earth System Scientist

The report clearly describes the interconnectedness of Earth’s spheres on the research question and applies multiple GLOBE protocols, or GLOBE protocol bundles, to investigate the research question. The research team clearly explains the dynamic and interconnected nature of Earth’s systems and the processes that influence and depend on one another through the analysis and interpretation of GLOBE and Earth system science data.

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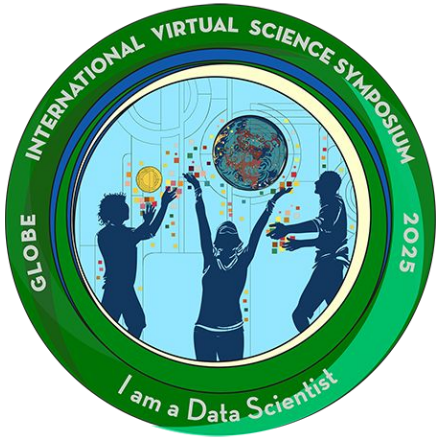
2025 IVSS Theme

30 Years of GLOBE: Understanding the Past, Present, and Future

Required Badge for Stipend Eligibility



I am a Data Scientist

The report includes in-depth analysis of data downloaded from the GLOBE Database as well as the students' own data sources, if new data is collected. Students discuss limitations of these data, make inferences about past, present, or future events, or use data to answer questions or solve problems in the represented system.

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I am a Data Scientist Badge Requirements

Reports must include analysis of data downloaded from the GLOBE database, including the following:

- Data Tables
  - Organized, properly labeled, and contain all data retrieved from the GLOBE database
  - Raw data included as a separate page labeled “Appendix” for review
- Data Analysis
  - Graphs are properly labeled and appropriate for the data collected
  - Statistical/mathematical analysis clearly communicated
- Discussion of Analysis and Conclusions
  - Data analysis is described and claims reference data
  - Compare results with published or expected results

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“I am a Data Scientist” Badge Example from 2024 IVSS Stipend Recipients from Bhutan

A comprehensive investigation on Carbon Storage in the vegetation of our schoolyard and determining the Carbon Footprint of the school through the measurement of carbon using GLOBE’s Carbon Cycle Protocols.

Organization(s): Pelrithang Higher Secondary School

Country: Bhutan

Student(s): Sangay Choden Yeshey Wangchuk Kalpana Mongar Usha Pyakurel Shankar Ghimrey

Grade Level: Middle School (grades 6-8, ages 11-14)

GLOBE Educator(s): Arun Kumar Chhetri

Contributors: Sahapati Gurung (Assistant Focal Teacher)

Report Type(s): International Virtual Science Symposium Report

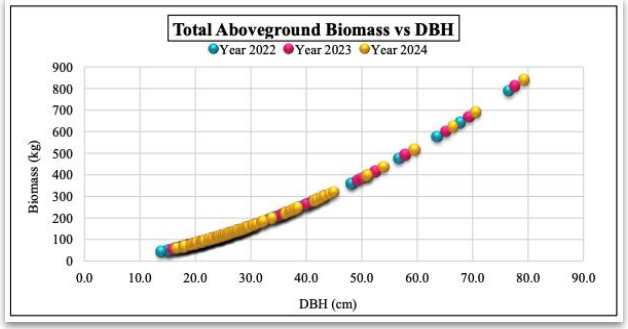
Protocols: Carbon Cycle

I AM A DATA SCIENTIST

This research involves a thorough measurement of carbon stored in the trees, shrubs and herbaceous of our schoolyard.
We have tried to provide an in-depth analysis of the data collected over a period of three years. We also analyzed net primary productivity (NPP) and the Carbon Footprint.

Table 5 The details from the GLOBE Visualization System for the three measurements.

School Name	Pelrithang Higher Secondary School		
Site Name	PHSS: Non-Standard Carbon Cycle Site		
User id	85378938		
Latitude	26.90234		
Longitude	90.49045		
Elevation	289.4		
Plot Size (m^2)	2085.8		
Site Type	Non-Standard		
Measured on	2022-10-10	2023-08-22	2024-02-24
Total Biomass (g/m^2)	**7512.1**	**8670.3**	**9259.3**
Total Carbon Storage (gC/m^2)	**3756**	**4335.1**	**4629.7**
Tree Biomass (g/m^2)	5764.2	6291.3	6681.3
Tree Carbon Storage (gC/m^2)	2882.1	3145.6	3340.6
Shrub Biomass (g/m^2)	1679.3	2310	2505.7
Shrub Carbon Storage (gC/m^2)	839.7	1155	1252.8
Herbaceous Biomass (g/m^2)	68.6	69.1	72.3
Herbaceous Carbon Storage (gC/m^2)	34.3	34.5	36.2



- ☑ Data tables with GLOBE data
- ☑ Graphs and data analysis
- ☑ Data entered and retrieved from the GLOBE database
- ☑ Badge explanations

Scan to view this project example!

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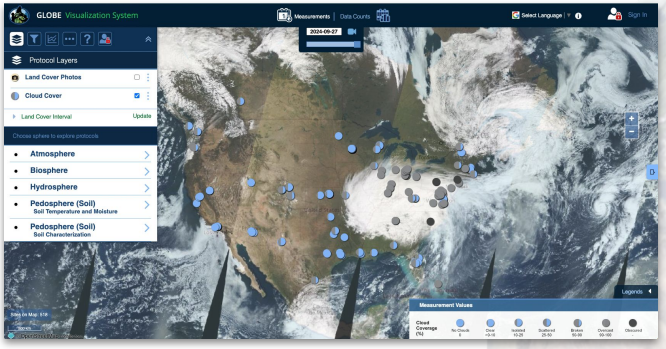
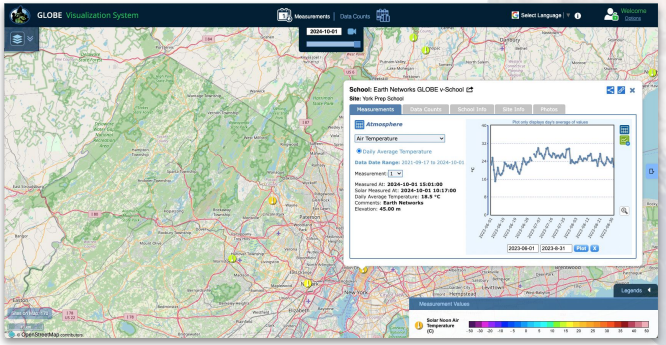
Visualize and Download GLOBE Data:
GLOBE Visualization System (GLOBE Vis)
Advanced Data Access Tool (ADAT)

Sponsored by: NASA Supported by: NSF NOAA

GLOBE Visualization System

- **Features of GLOBE Vis**
  - Visualize data: map view, data table, or plot data
  - Compare data from multiple sites
  - Create multi-site plots
  - Download data as a CSV file





https://vis.globe.gov/GLOBE

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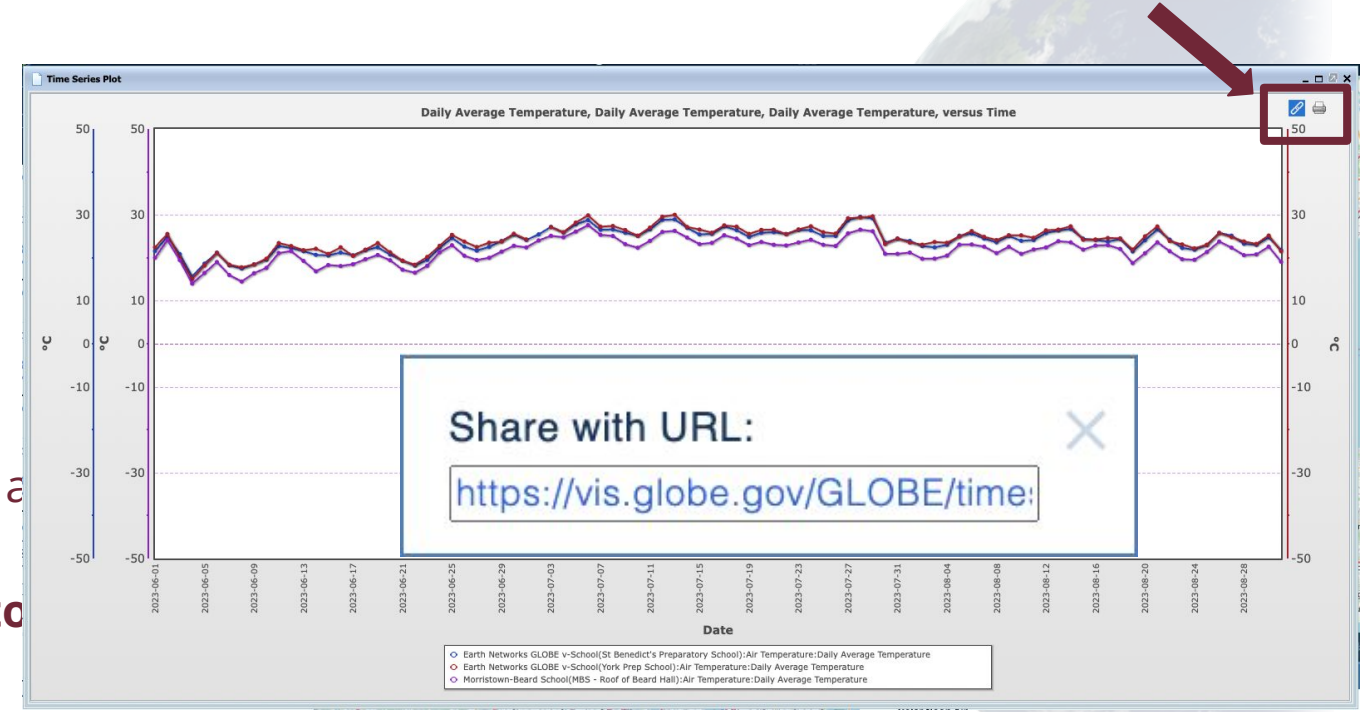
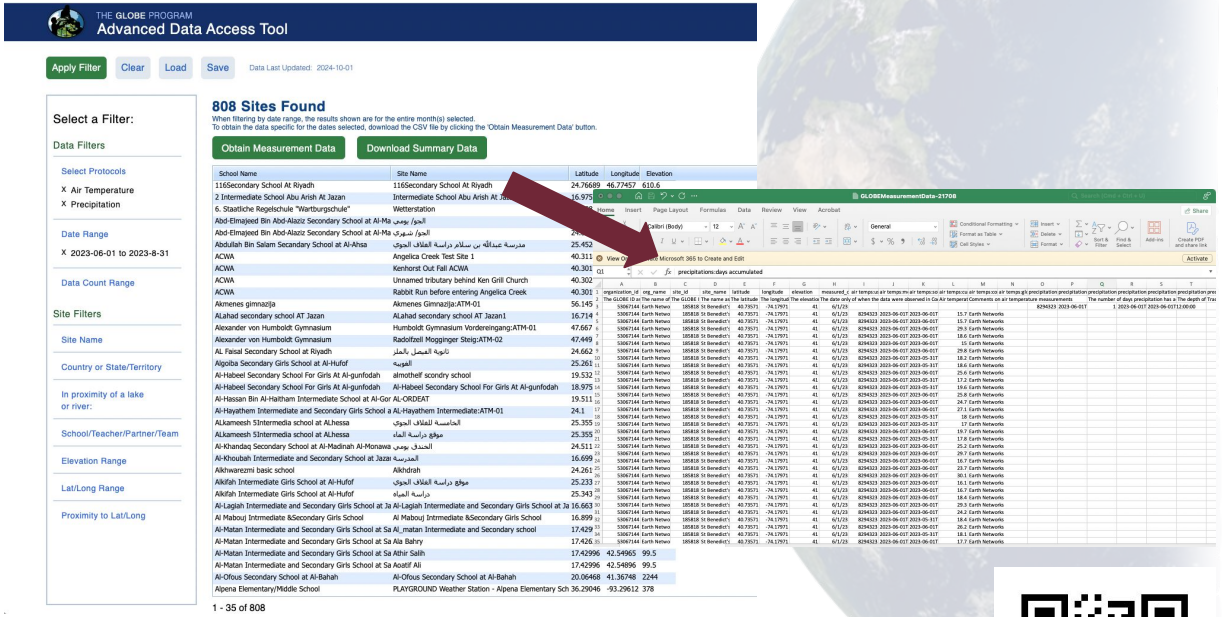
GLOBE Vis: Save, Share, or Print Data Plots

- **Click on the icon to create a shared link**
  - Share link with others or save to return to plots at a later date
- **Click on the icon to print or save as PDF**



GLOBE's Advanced Data Access Tool (ADAT)

- **Features of ADAT**
  - Advanced data search filters
  - Identify data-rich sites
  - Download data from one or more sites
  - CSV download



https://datasearch.globe.gov

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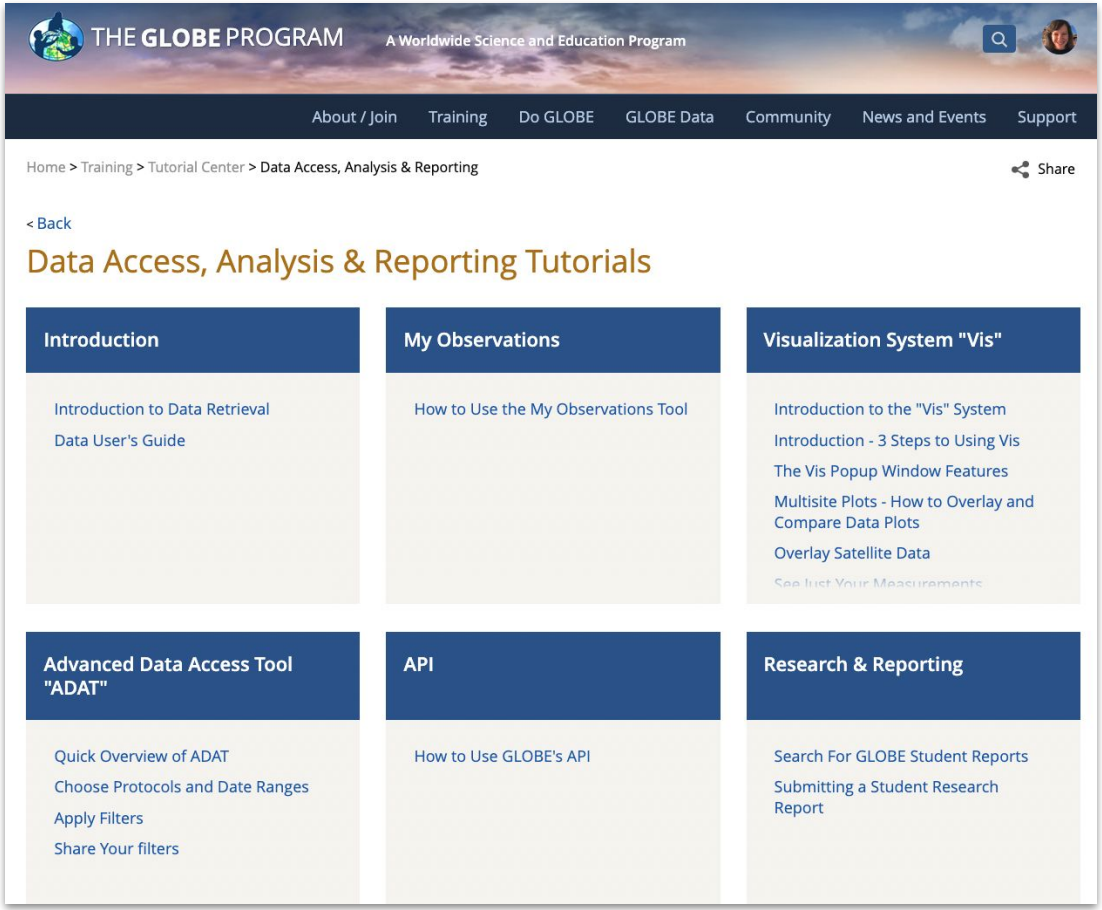

GLOBE Data Resources

Step-by-step video tutorials

- GLOBE Vis System
- Advanced Data Access Tool (ADAT)
- GLOBE API

https://www.globe.gov/get-trained/tutorial-center/data-access

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Additional Resources

GLOBE Data Challenge

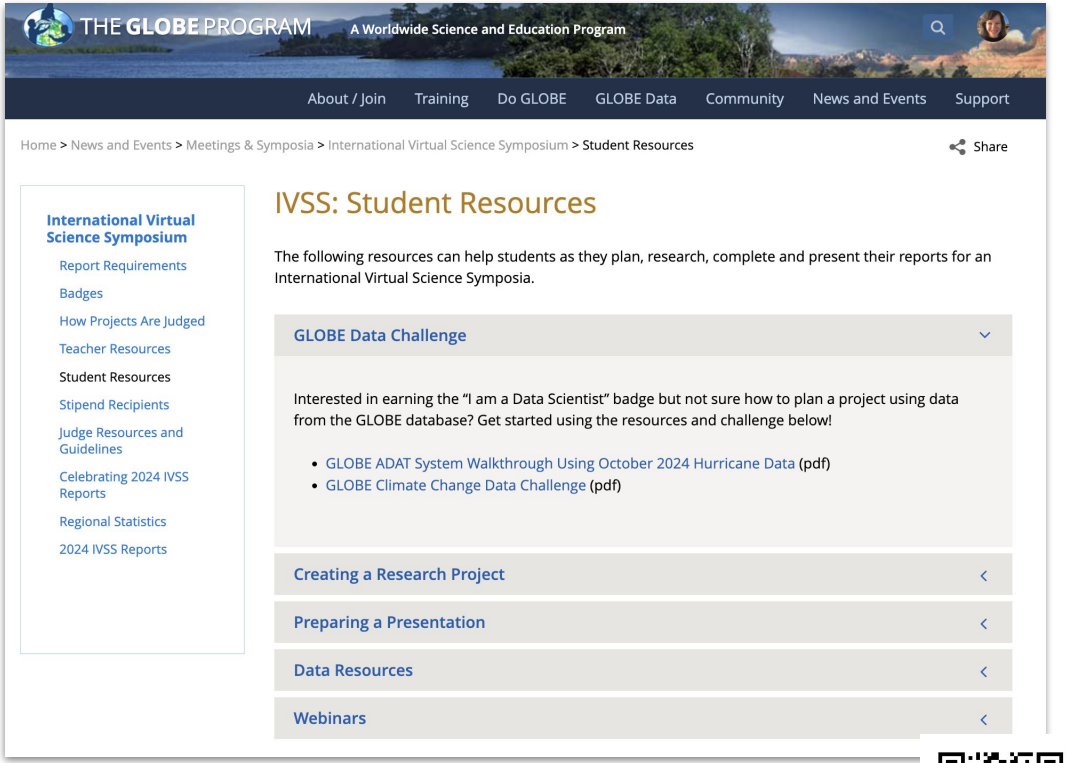
- ADAT Walkthrough
- Climate Data Challenge

Data Resources

- GLOBE data resources

Archived Webinars

- 2025 IVSS playlist, including several videos from GLOBE partners and NASA project scientists



https://www.globe.gov/news-events/meetings_symposia/virtual-conferences

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Upcoming IVSS/Campaign Webinars:

- 5 December: A Tale of Two Scientists: Changes in Data and Technology Over Time
- 8 January: AI in Earth Systems: Leveraging Technology Ethically
- 22 January: How to Submit an IVSS Project

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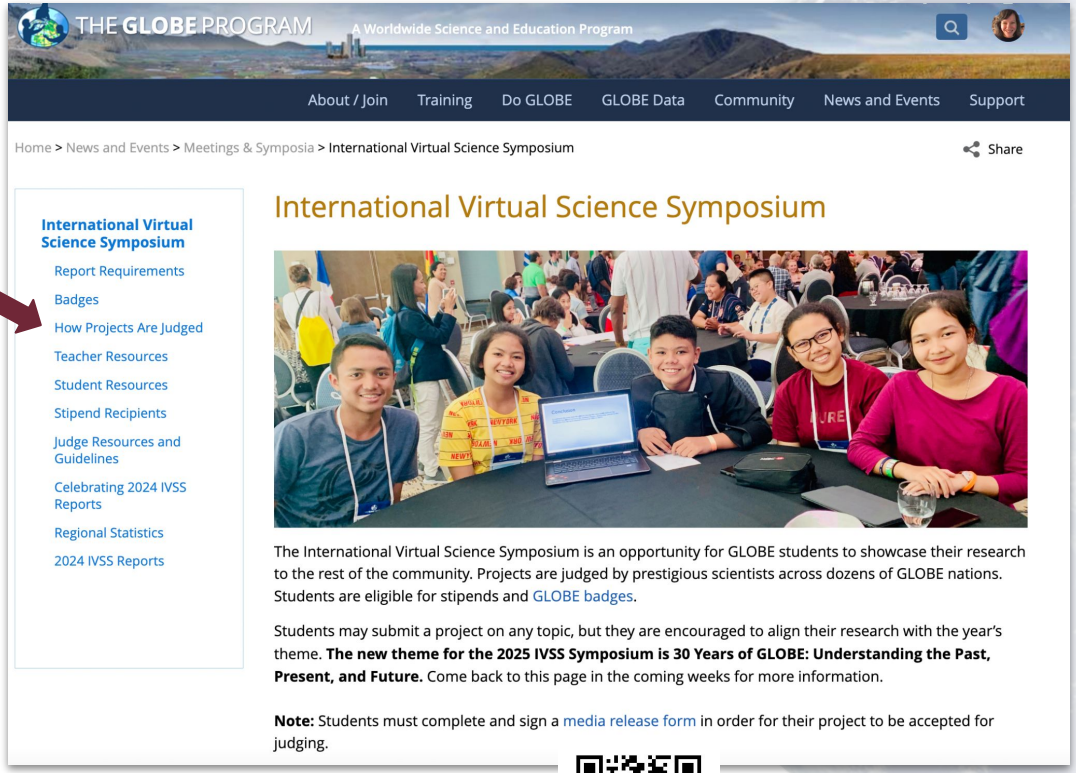
Visit the IVSS Page to Learn More!

Report requirements, badge information, student resources, and more!

Recorded IVSS webinars:

- IVSS Informational Webinar
- Accessing Data from the GLOBE Database
- Resources to Support Student Research from GLOBE Partners and NASA Scientists

Questions? Email:
ivss@nasaglobe.org



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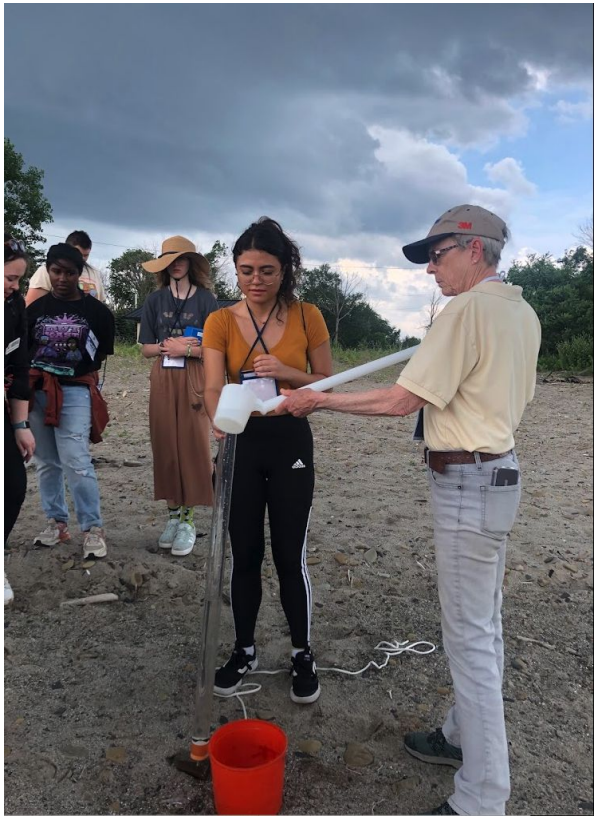

Thank you! Questions?