

Adapting a Citizen Science Data Collection Tool for Community Science

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Abstract: Citizen science programs that focus on widespread data collection can be adapted for more focused community-based science through partnerships. Through case studies of community-based partnerships, we identify two common elements needed to adapt one citizen science platform, GLOBE Observer*, for successful community science: a way for partners to personalize the “ask” of volunteers and support for implementation. Partnering with community-based organizations can help a citizen science program broaden participation, increase data collection, and facilitate new science.

*GLOBE Observer (GO) is a NASA-funded app designed to enable citizen scientists to participate in The Global Learning and Observations to Benefit the Environment (GLOBE) Program, an international and science and education program in which participants collect environmental data in support of Earth system science.

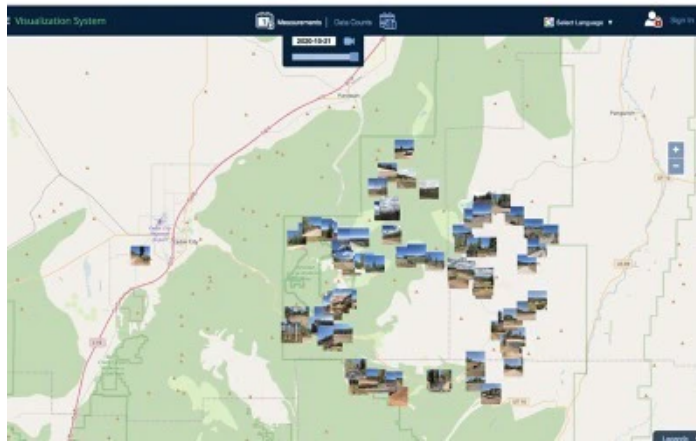


What are the common elements for success?

GLOBE Observer has sought to implement our citizen science data collection through several community-based partnerships with organizations like Los Angeles Public Library, University of Oklahoma, Australia Scouts, Lewis and Clark National Historic Trail, Dixie National Forest, and others. Partners implement GLOBE Observer to meet their own science or education outcomes based on local community needs. We noted two common elements across all successful community partnerships.

1. Give partners the ability to "personalize" the ask.

Give partners the tools to apply your citizen science data collection mechanism to meet their



research goals. For example, Dixie National Forest wanted to recreate a series of historical photos using GLOBE Observer's land cover protocol to track change to the forest. This and other partnerships led us to plan a mechanism to request data at specific locations (in development).



Partners can personalize your materials to support their volunteer community if you leave space for partners to add their instructions, logo, or other information. Examples include a personalizable recognition certificate and observation station with space for instructions or partner branding.

2. Provide support for local implementation

Successful community partnerships take time and support. For example, GO provided volunteer training (pre-COVID) for University of Oklahoma, Southern Nazarene University and OK City libraries to use GO to identify mosquito habitats in support of local research. Other partnerships have succeeded because of routine calls with community leaders.



**TOOLKIT
for INFORMAL
EDUCATORS**

Connect your organization's mission to real-world science by introducing visitors to GLOBE Observer, an app-based citizen science project. GLOBE Observer can be integrated into programming at museums, science centers, zoos and aquariums, parks, public gardens, libraries and more. Simply engage visitors with a smartphone or tablet, integrate GLOBE Observer into an existing talk or demo, or create a new cart or event centered around the app.

It's easy to get started with GLOBE Observer. Simply download the app, register for an account and plan your program using the resources included below. In this toolkit, you will find information, activities and resources for each of the app modules. In the *ADVANCED* section, you can find more information on topics such as organizing an event and becoming a GLOBE partner. Have a question? [Contact us](#).

Choose Your Protocol



ACC Argentina

Argentina
Registered 2018

Data Site Locations

Members / Observations

DATA SITES

Include other science sites

Site Name	Organization Name	Investigation Area	# Observations	Created	Last Used
LAND COVER	World Citizen Science	Argentina	0	10/20/2018	10/20/2018
LAND COVER	World Citizen Science	Argentina	0	10/20/2018	10/20/2018
LAND COVER	World Citizen Science	Argentina	0	10/20/2018	10/20/2018
LAND COVER	World Citizen Science	Argentina	0	10/20/2018	10/20/2018
LAND COVER	World Citizen Science	Argentina	0	10/20/2018	10/20/2018

You can support local implementation by providing tools that enable partners to organize their own citizen science initiatives. GLOBE has a team mechanism that allows volunteers to organize themselves. Example: a corporate partner used the team function to set up an employee volunteer initiative. GLOBE's team function grouped the company's observations so they could see their impact. GO also has an online partner toolkit that includes training resources and editable materials to help community leaders support their volunteers.

What are the benefits of community partnerships?

Community partnerships take time and resources to succeed, but the effort has benefited GLOBE Observer. We have seen an increase in data collection and associated science and broadened participation among volunteer groups we didn't have the capacity to directly support.

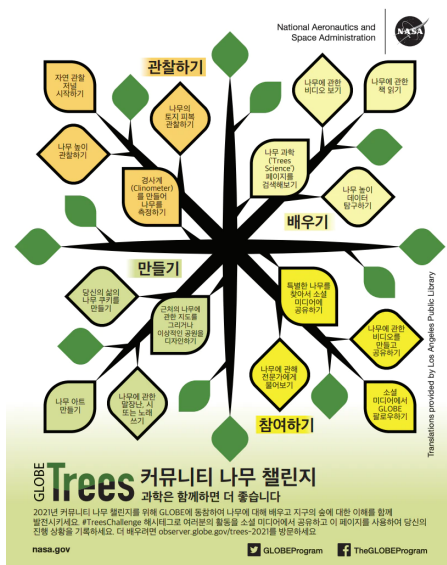
1. Community partnerships result in more data and science

While a focus on community partners draws time away from doing science, it provides increased volunteer support, which resulted in more

regional data density. For example, data collection from two partnerships, one with Lewis and Clark National Historic Trail and the other with Australia Scouts. The data collected because of these two partnerships resulted in a peer-reviewed scientific publication (in press) that otherwise could not have happened because of a lack of data density.



2. Community partnerships broaden participation



Partners reach volunteer groups our project would not otherwise have the capacity to support. Partners also understand local constraints and needs better than we do, and so fill gaps in user support. Example: the Los Angeles Public Library translated some of our materials into languages their community needs, such as Korean and Armenian.

The LA Public Library also held a public webinar to help their community participate in GLOBE Observer, reaching individuals and groups we hadn't. Another example is a partnership with SciStarter, which allowed us to reach Girl Scouts through the Think Like a Citizen Scientist Journey. This is another broad audience group we would not have reached as successfully on our own.

Thank you to the GLOBE Observer team for their role in supporting partnerships. Kristen Weaver, Heather Mortimer, Cassie Soeffing, Rusty Low, Holli Kohl, Theresa Schwerin, Brian Campbell, and Tassia Owen led the partnerships featured here. See our full team at

<https://observer.globe.gov/about/team>

Thank you to our community partners. Those named in this presentation include Susan Leslie, Dixie National Forest; Dr Michael Wimberly, University of Oklahoma; Dr. Caio Franca, Southern Nazarene University; Ashley Danielson, Lewis and Clark National Historic Trail; John Pring, Geoscience Australia (Scouts Australia); Vivienne Byrd, Los Angeles Public Library; and Darlene Cavalier, SciStarter Girl (Girl Scouts). Thank you to all other partners who were not mentioned here.

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<https://science.nasa.gov/learners/science-activation-teams>.

GLOBE Observer is part of the GLOBE Program.

<https://www.globe.gov/>

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