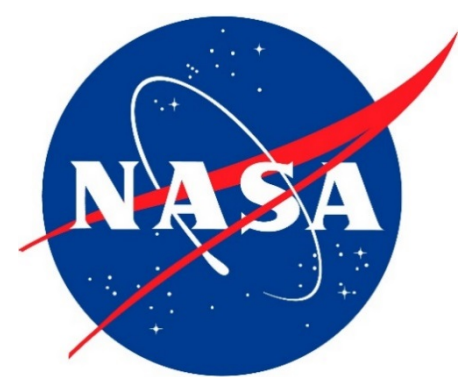
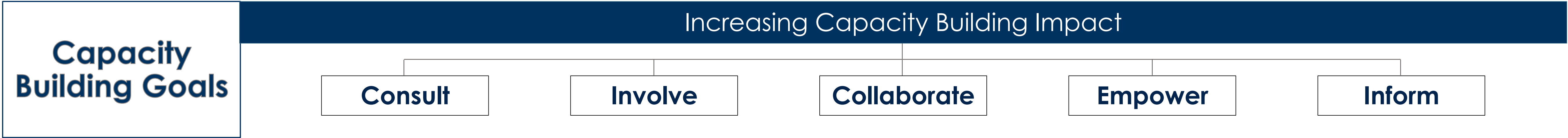


How Can the NASA Capacity Building Program Collaborate with VLAB?



Nancy Searby, NASA HQ; Ana Prados, UMBC/JCET; Lauren Childs-Gleason, Wise County



HOW?

The Applied Sciences Capacity Building Program (CBP) works through both program and element activities. Program element activities include ARSET, DEVELOP, and SERVIR. Through these elements, CBP pursues building capacity by means of trainings (in-person and webinars), short-term feasibility projects, and longer, multi-year projects. Programs support Vlab’s stated interests in climate monitoring; marine, coastal, and ocean monitoring; dust, ash, and smoke monitoring areas; and weather forecasting.

TRAININGS

- CBP provides capacity building through in-person, webinar, and on-demand virtual module trainings.
- ARSET works directly with agencies and policy makers to develop in-person and online trainings that teach end-users how to access, visualize, and apply NASA Earth Science Data in their professional area. Modules and webinar recordings are publicly available in English and Spanish on the program website.
 - SERVIR, through it’s international hubs, offers trainings to decision makers in developing countries to support management.

SHORT-TERM FEASIBILITY PROJECTS

CBP provides capacity building through feasibility projects that take place in rapid 10-week long terms through the DEVELOP Program. These projects serve as a dual capacity building venue with project participants gaining hands-on experience in the use of Earth observations and partner organizations gaining results and methods from these projects.

LONGER-TERM MULTI-YEAR PROJECTS

CBP provides capacity building through in-depth international projects conducted by SERVIR and co-developed by developing countries. These projects provide products and tools to enhance decision making in the developing world.

ARSET

<http://arset.gsfc.nasa.gov>

Conducts training in the use of NASA remote sensing resources for environmental applications worldwide. ARSET develops in-person and online trainings that teach decision makers how to access, visualize, and apply Earth observations. In 2015, ARSET trained 2,530 individuals.

DEVELOP

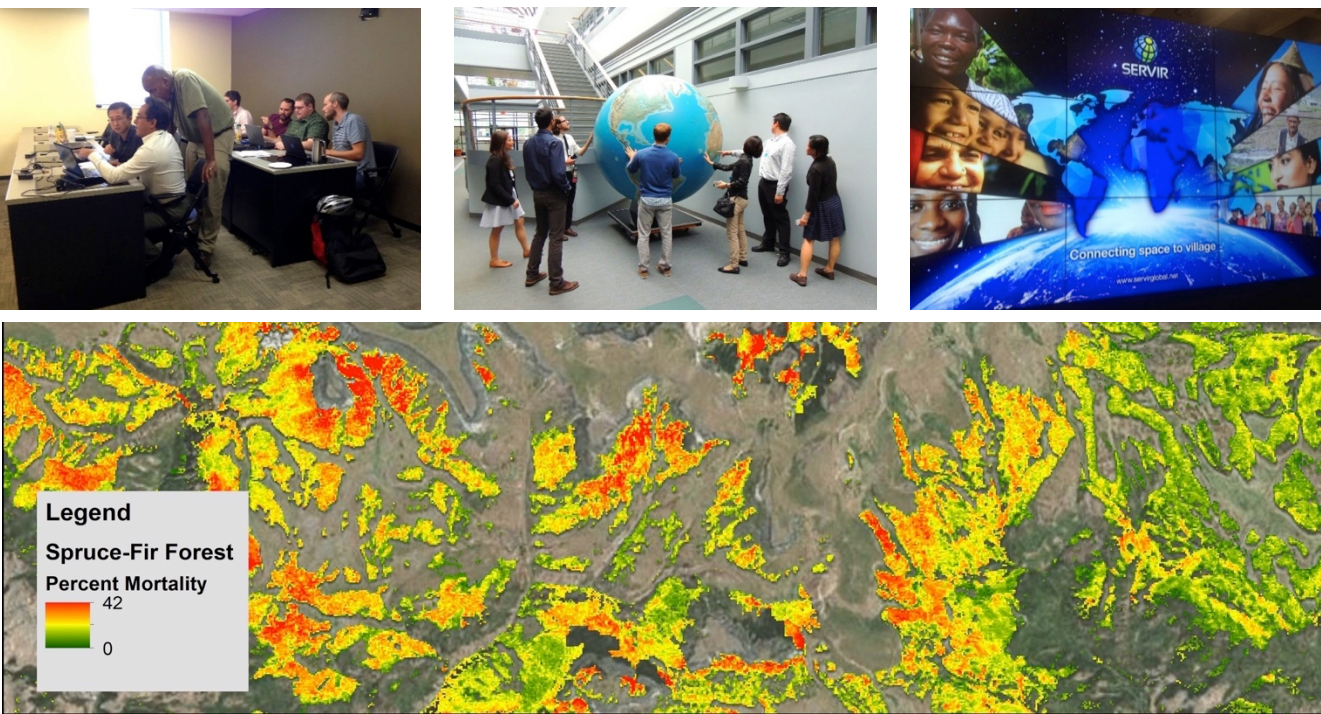
<http://develop.larc.nasa.gov>

Addresses environmental and public policy issues by conducting interdisciplinary feasibility projects that apply the lens of NASA Earth observations and build capacity in their use for both participants and organizations. In 2015, DEVELOP had 393 participants.

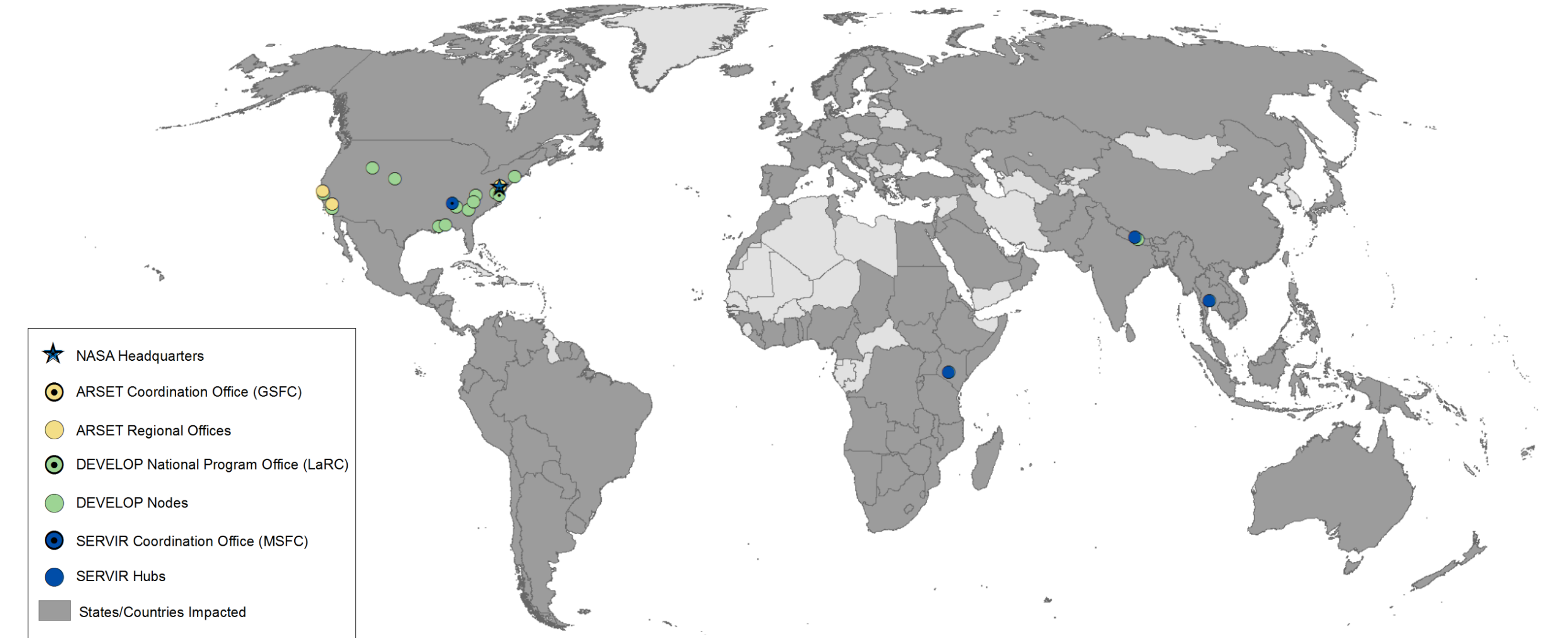
SERVIR

<http://www.servirglobal.net>

Works in partnership with leading regional organizations worldwide to help developing countries use information provided by Earth observations for improving resilience to climate change. SERVIR empowers decision-makers with tools, products, and services to act locally on climate-sensitive issues. In 2015, SERVIR had 834 participants.



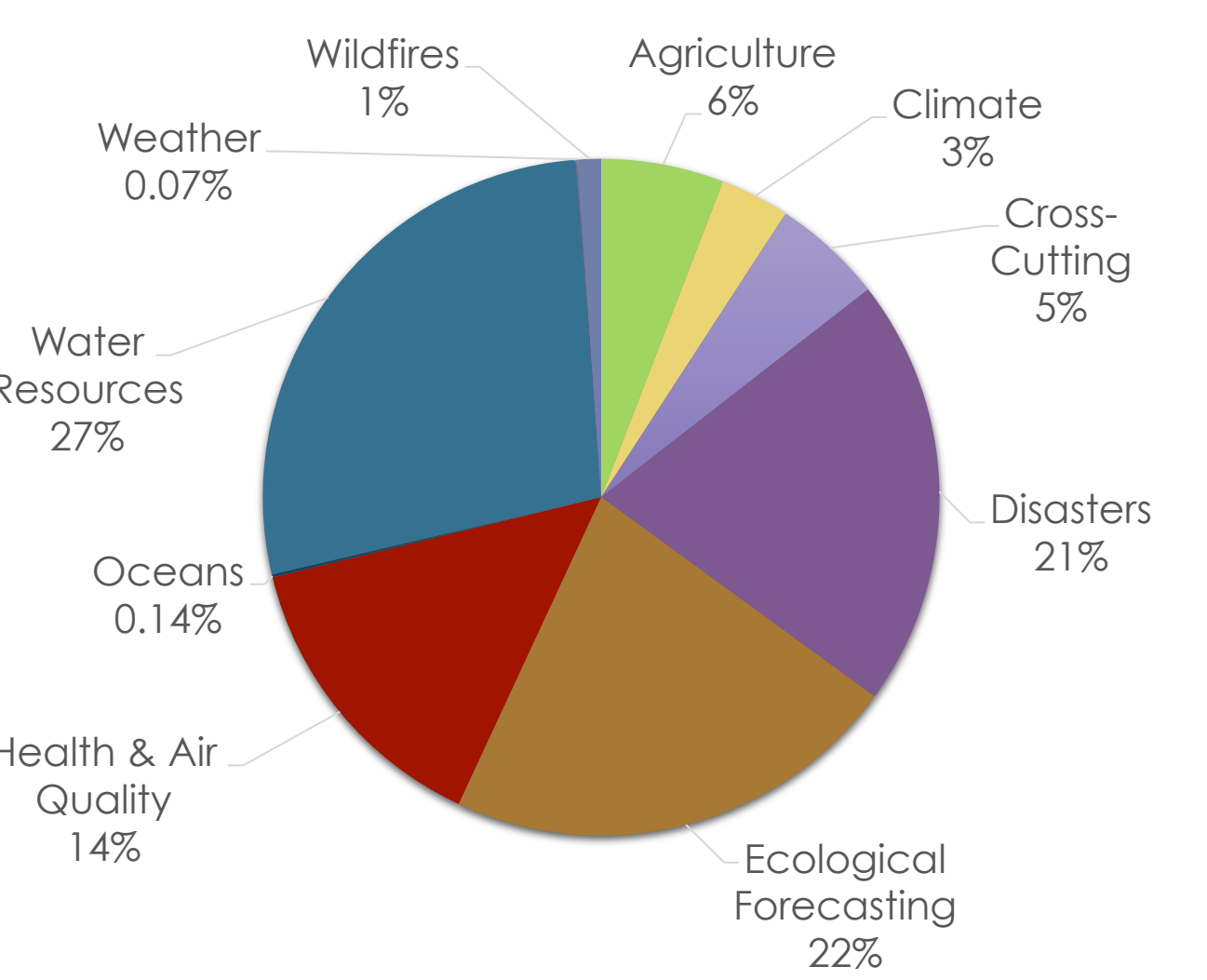
WHERE?



WHAT?

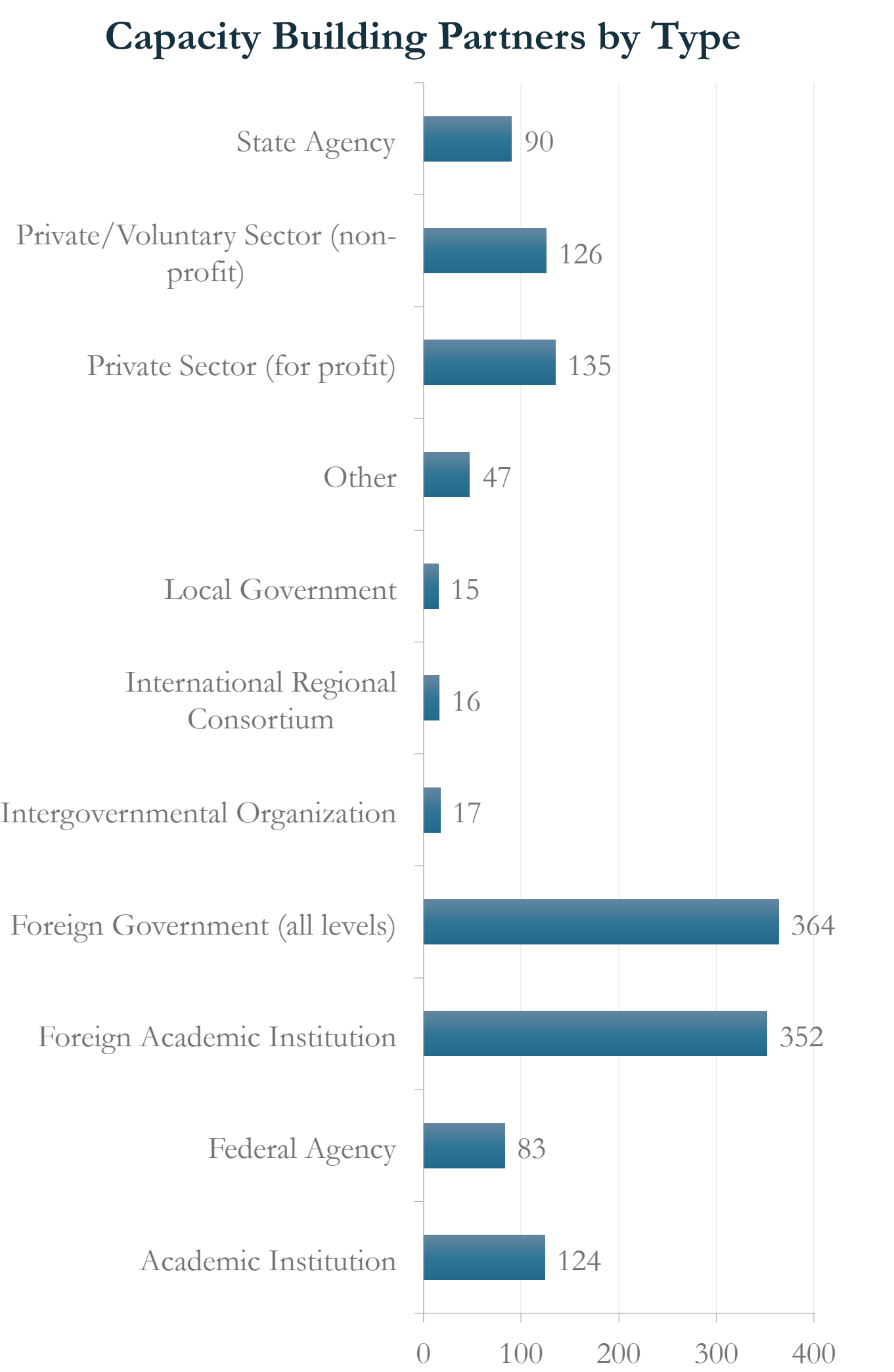
The Applied Sciences Capacity Building Program (CBP) builds capacity to expand the Earth observations user base and increase the awareness within non-traditional audiences of NASA Earth observations data and products.

CBP builds capacity across a spectrum of application areas. In 2015, CBP addressed water resources most:

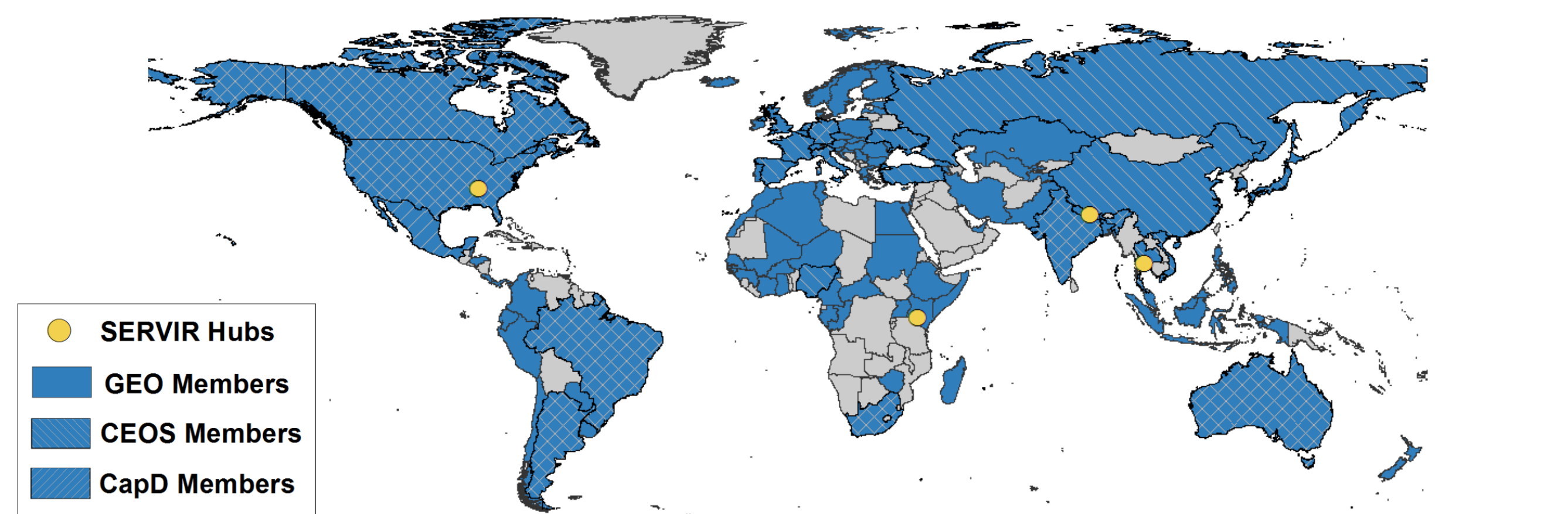


WHO?

In 2015, CBP worked most with foreign governments and academic institutions:



NASA CBP Engagement with the International Community



CEOS WGCapD

NASA is a member of the Committee on Earth Observation Satellites (CEOS) Working Group for Capacity Building and Data Democracy (WGCapD) that is working to achieve the following objectives:

- Increase access to data, products, and tools and ability to use them through targeted training workshops;
- Build awareness of new mission datasets, and how to use them within the context of existing datasets;
- Support CEOS WGs and virtual constellations (VCs) on their own capacity building initiative (vs CapD doing it for them);
- Improving communications and coordination between Agency and WG/VC/CapD capacity building and education activities as well as related international activities such as the GEOCAB Portal and
- Work with international stakeholders such as UNOOSA and other UN agencies to support needs in emerging space agencies or other – including user needs.

GEO

NASA participates in the GEO Capacity Building Forum (CBF). The GEO CBF is working to strengthen coordination of capacity building in GEO, sharing of information on activities, building synergies, collating capabilities and resources and identifying challenges and gaps and how these may be addressed. The CB, through coordination, will bring to the forth capacity building efforts in GEO.

AMERIGEIOSS

AmeriGEOSS is a regional initiative that brings GEO resources to the needs of the Americas Caucus member. Thematic priorities include: 1) agriculture, associated with climate variability, climate change, and food security; 2) disaster risk reduction, particularly for data exchange associated with early warnings, and for the generation of regional products of early warnings; 3) water, associated with the management approach of water resources and data management; and, 4) biodiversity and ecosystem monitoring, in the context of capacity building for better monitoring, management, and maintenance of ecosystems and biodiversity they support. GEO membership is open to nations that apply and agree to GEO principles. Currently, the 16 Americas Caucus members include: Argentina, Bahamas, Belize, Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Panama, Paraguay, Peru, the United States, and Uruguay.

ACHIEVEMENTS IN 2015

The Capacity Building Program engaged **4,104 people** and **1,369 organizations** across **135 countries**.

More than **3,700** individuals were engaged in **78** trainings, **93** short-term feasibility projects, and **47** longer-term, multi-year projects were conducted.

The CBP collectively used **67** Earth-observation assets in trainings and projects, with **193** stakeholders using information in decision making.

NASA CBP Challenges, Future Plans & Collaboration Interests

Collaboration Interests

- Improved coordination of activities so that resources can be leveraged and efforts amplified
- Alignment of training types and geographic areas
- Alignment of activities within specific thematic areas through projects
- Define collaboration opportunities with VLAB and NASA CBP programs (ARSET, DEVELOP, and SERVIR) as well as WGCapD and GEO to utilize Earth observations to monitor coastal health, marine and ocean resources, water availability, and drought to enhance environmental decision making, and to share and build capacity building best practices

Challenges

- Discoverability of capacity building activities so that we are able to coordinate and leverage
- Defining and documenting user needs and then brokering those needs to match with available capacity building resources
- Putting the necessary measurements and programs in place to build sustained capacity and know the impact

Future Plans

In 2016, the NASA Capacity Building Program continues its pursuit of increasing the number of people able to use Earth observations in their decision making.

The program continues to conceive of ways to make Earth science data, products, and tools more known and accessible, while working with boundary organizations that can help increase reach through organizations’ previous engagement with key end user groups. CBP is also exploring approaches to increase awareness within non-traditional audiences, such as indigenous people of North America.