



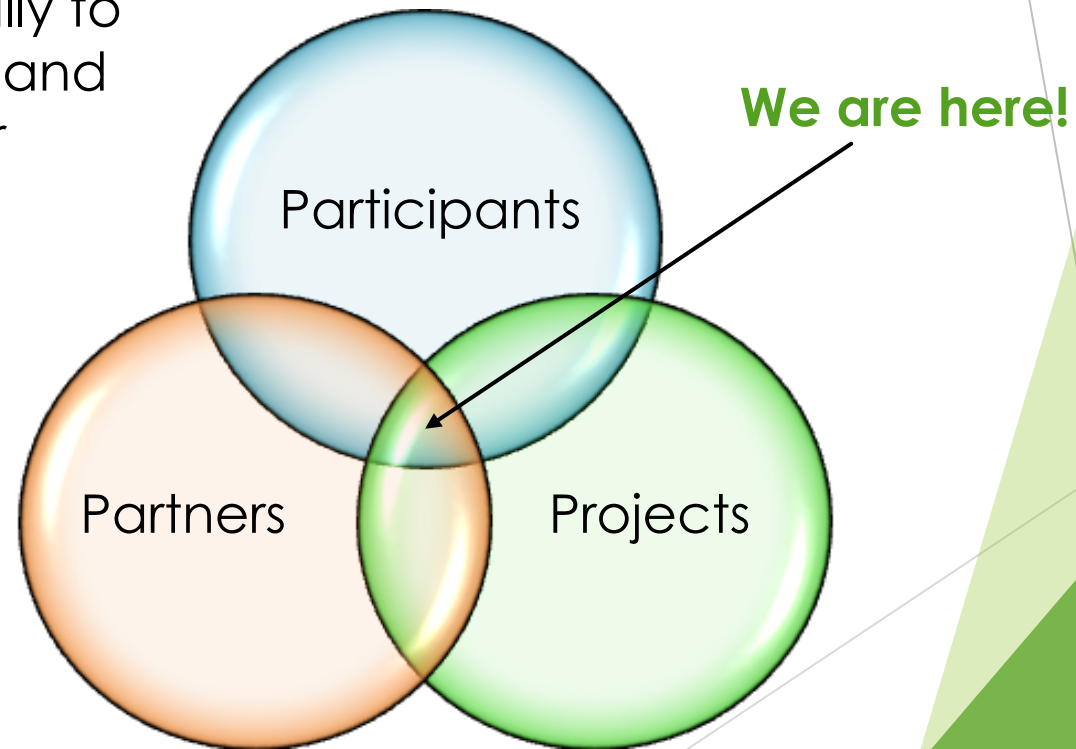
Impact Analysis

Activities and Overview

FY 2017 Retreat, Langley Research Center

Mission Statement:

To support DEVELOP's continued growth as a dual capacity building program through measuring, evaluating, and communicating the results of such efforts both internally to foster the ongoing improvement of participant and partner experience, and externally to promote the benefits of the program and value of Earth observations to partner organizations, potential participants, and society.



2016 Summary Statistics



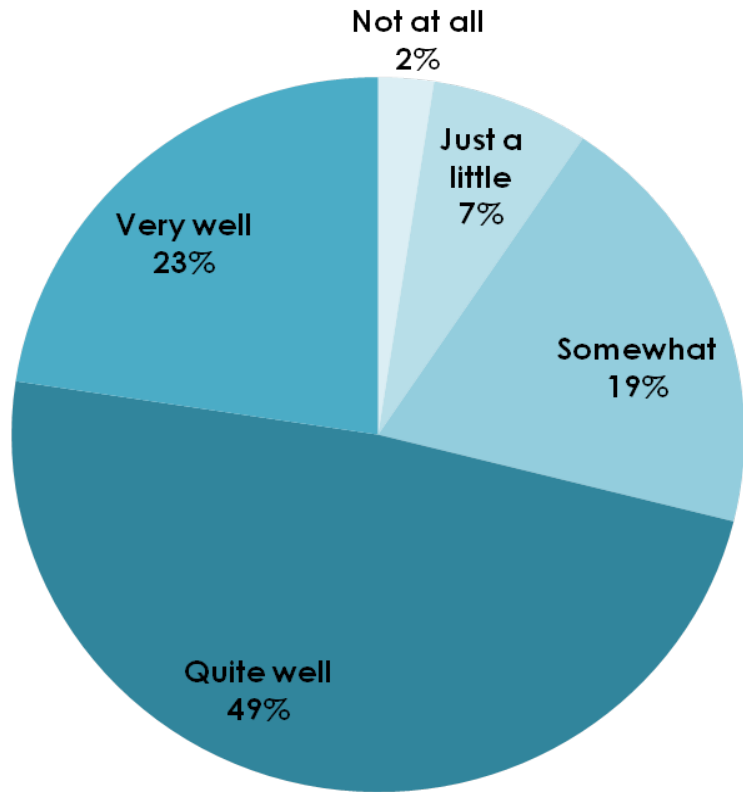
Image Credit: NASA

Participants- Current



Personal Growth Assessment (PGA)

Section One of the Self-Evaluation (All Responses)



Post fall 2016 term PGA

- In the first section of the self-evaluation, ~72% of participants rated themselves/their improvement in the highest two of five categories.
- In the second and third sections, ~62% of participants rated themselves in the highest two of five categories and ~64% rated themselves in the highest of 4 categories respectively.

Results of the PGA



- Approximately 57% of participants answered they hoped to gain networking skills on the Entrance Survey
- Approximately 17% of participants listed this as a skill they gained on the Exit Survey
- Only about 51% of participants answered "Quite well" or "Very well" when asked how well their term with DEVELOP helped them learn to Network

New Assessments

► New Assessments

- Fellow Baseline & PGA/Exit Surveys
- CL PGA/Exit Surveys

► Purpose:

- Assess benefits from CL and Fellow opportunities
- How differs from participant opportunities

The image displays three overlapping survey forms. The top form is titled 'Fellow Expectations & Baseline Assessment - Entrance (FY17)'. The middle form is titled 'Fellow PGA & Exit Survey (Fall 2016)'. The bottom form is titled 'CL PGA & Exit Survey (Fall 2016)'. Each form includes a header with a blue background and a white box containing the survey title. Below the header, there is a paragraph of text explaining the purpose of the survey. The bottom form also includes a 'Background Information' section with fields for 'First Name' and 'Last Name', and a 'Please select your node location' section with radio button options for different locations.

Fellow Expectations & Baseline Assessment - Entrance (FY17)

As DEVELOP is a capacity building program, we are working to track the professional and technical skills built in our participants. The purpose of this form is to gather information about your skills and expectations before the Fellow year starts; there will be a follow-up form at the end of the term. Please be honest in your self-assessment. We hope this form will also provide you with the opportunity to reflect on your skills and what you hope to gain from the program this summer—DEVELOP is what you make it! Your responses will NOT affect your participation with the DEVELOP program. Thank you for helping us help you!

* Required

Background Information

First Name: *

Your answer

Last Name: *

Your answer

Please select your node location: *

☐ ARC (Moffett Field, CA)

☐ AZ (Tempe, AZ)

☐ FC (Fort Collins, CO)

☐ GSFC (Greenbelt, MD)

☐ ID (Pocatello, ID)

☐ IN (Indianapolis, IN)

Fellow PGA & Exit Survey (Fall 2016)

As DEVELOP is a capacity building program, we are working to track the professional and technical skills built. The purpose of this form is to gather information about your skills and expectations, feedback on the fall term, and feedback on the Fellow transition. Please be honest in your self-assessment. We hope this form will also provide you with the opportunity to reflect on your skills and what you hope to gain from the program this summer—DEVELOP is what you make it! Your responses will NOT affect your participation with the DEVELOP program. Thank you for helping us help you!

* Required

First Name: *

Your answer

Last Name: *

Your answer

Please select your node location: *

☐ ARC (Moffett Field, CA)

☐ AZ (Tempe, AZ)

☐ FC (Fort Collins, CO)

☐ GSFC (Greenbelt, MD)

☐ ID (Pocatello, ID)

☐ IN (Indianapolis, IN)

CL PGA & Exit Survey (Fall 2016)

As DEVELOP is a capacity building program, we are working to track the professional and technical skills built. The purpose of this form is to gather information about your skills and expectations, feedback on the fall term, and for new Center Leads, feedback on their transition into the position. Please be honest in your self-assessment. We hope this form will also provide you with the opportunity to reflect on your skills and what you hope to gain from the program—DEVELOP is what you make it! Your responses will NOT affect your participation with the DEVELOP program. Thank you for helping us help you!

* Required

Background Information

First Name: *

Your answer

Last Name: *

Your answer

Please select your node location: *

☐ ARC (Moffett Field, CA)

☐ AZ (Tempe, AZ)

☐ FC (Fort Collins, CO)

☐ GSFC (Greenbelt, MD)

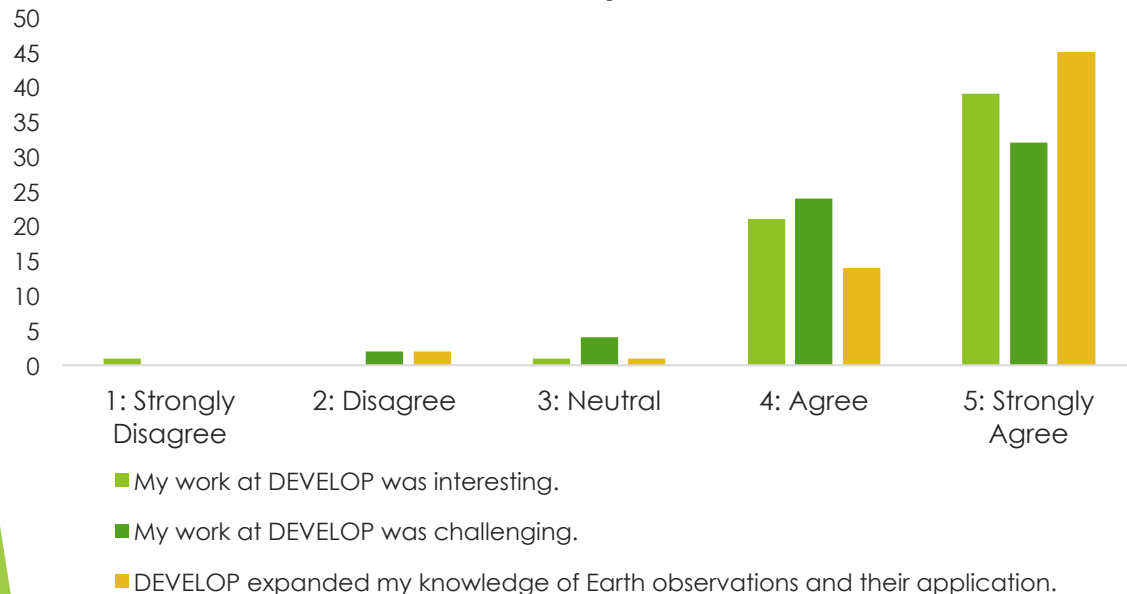
☐ ID (Pocatello, ID)

☐ IN (Indianapolis, IN)

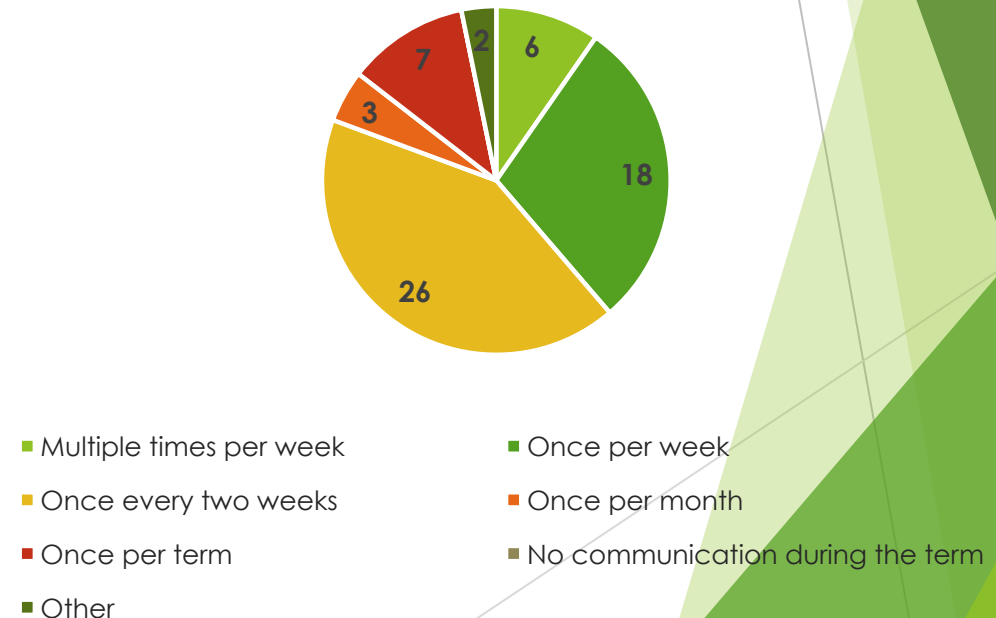
Exit Surveys

- ▶ Given to Participants each term
- ▶ Method to collect anon. feedback
- ▶ Given to SAs, NPO, and for performance reviews
 - ▶ Now compiled for CLs

DEVELOP Experience



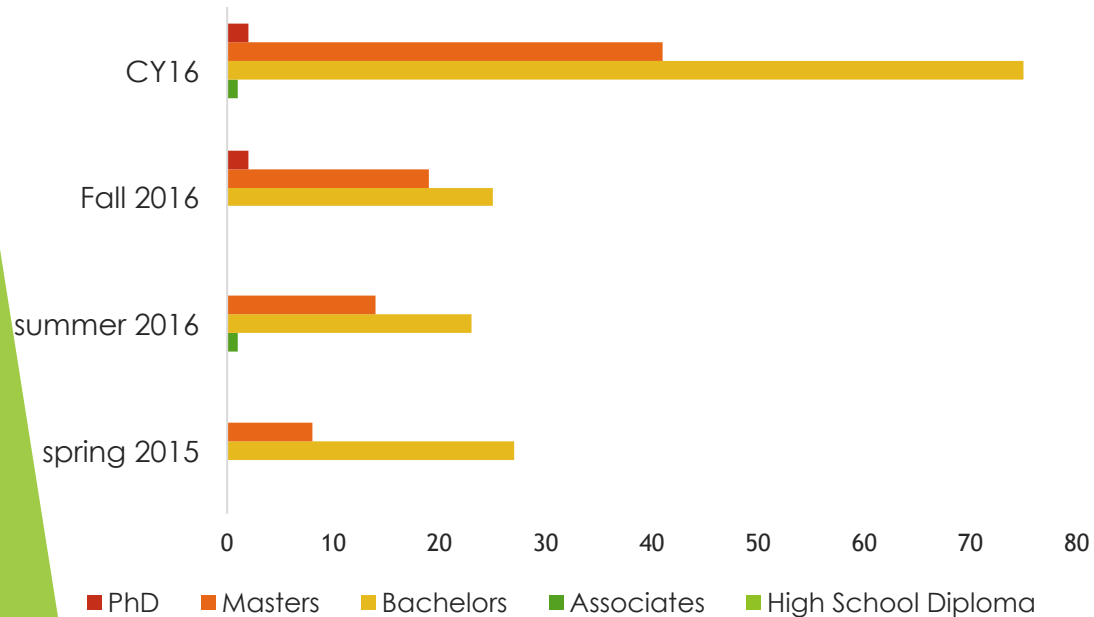
During the term, communication with our end-user(s) and/or boundary organization(s) took place



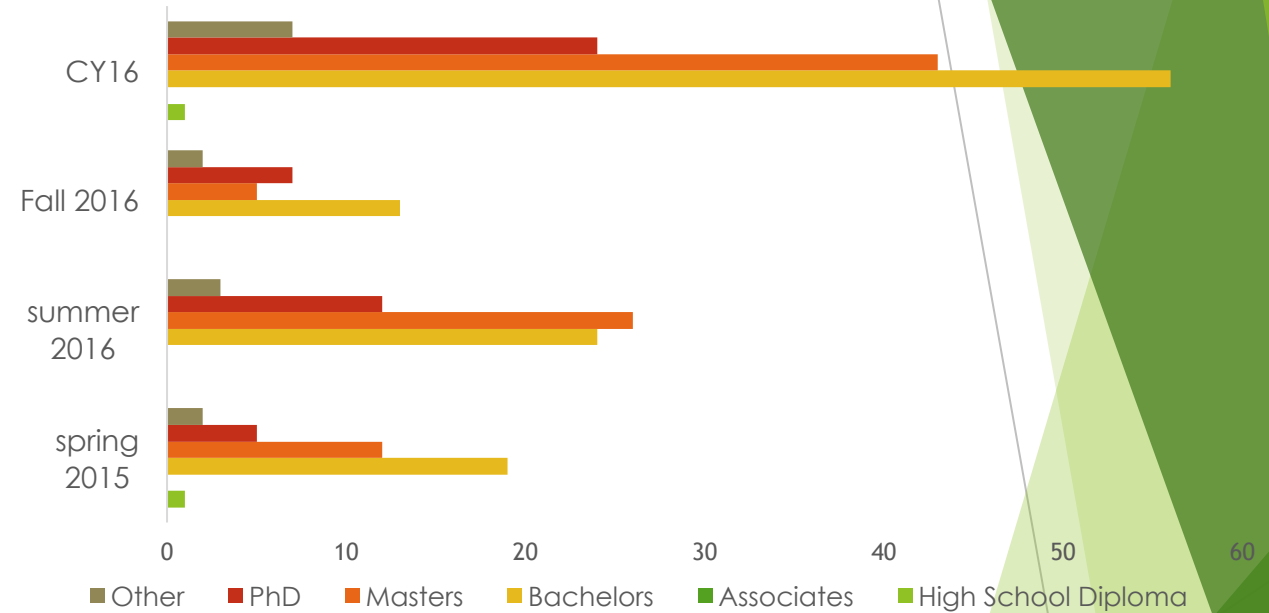
Participant Info Sheets

- ▶ Collects demographic info
- ▶ Used for reporting

Early/ Transitioning Professional by Education



Students by Education



Participant Info Sheet

Questions:

Name You Prefer to be Called (if different than above): _____

First Name: _____ Last Name: _____

Email Address (for long-term contact): _____

State of Residency (e.g. What state issued your license/ID?): _____

Sex (Place an "x" next to chosen response): _____

Race/Ethnicity (Place an "x" next to chosen response. Select all that apply. If "other", write in response.): _____

Veteran Status (Place an "x" next to chosen response): _____

Age (Place and "x" next to chosen response): _____

Responses:

Female

Male

Prefer Not to Answer

American Indian or Alaska Native

Black or African American

Native Hawaiian or Other Pacific Islander

White (Hispanic)

White (non-Hispanic)

Prefer Not to Answer

None

U.S. Military Veteran

U.S. Military Active Duty

Prefer Not to Answer

If Veteran or Active Duty, Branch:

18 - 25

26 - 34

35 - 44

45 - 54

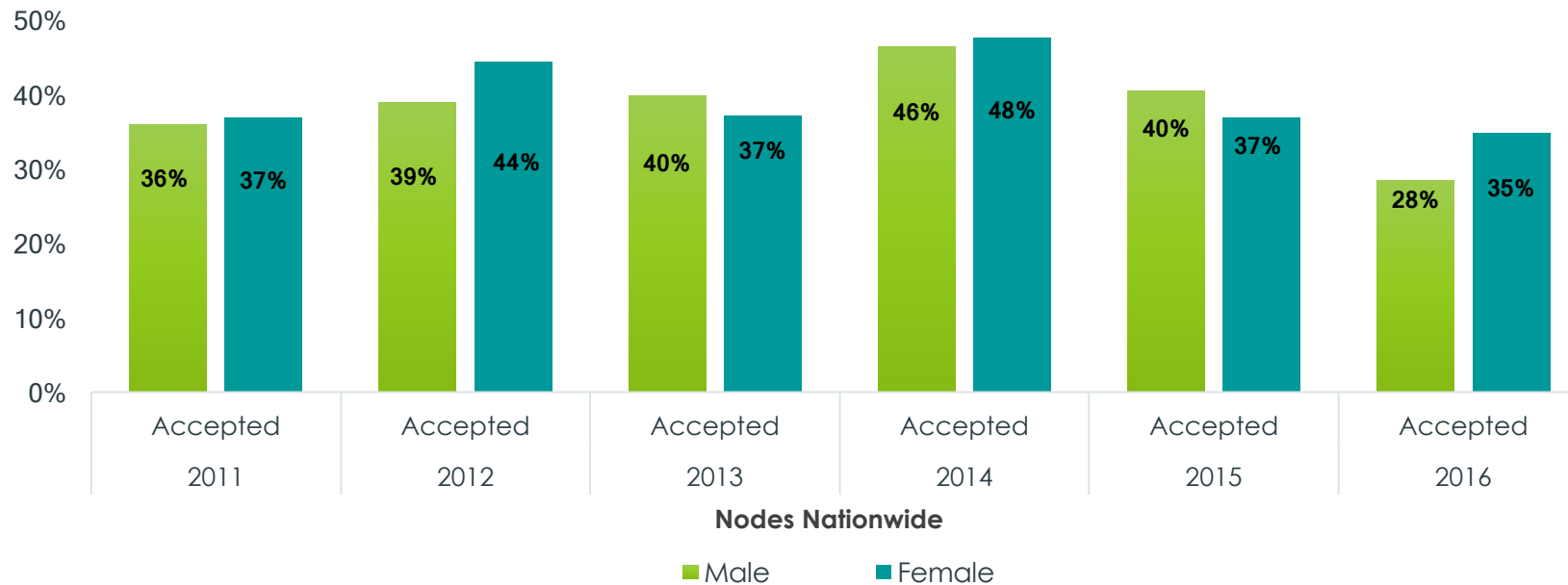
55+

Prefer Not to Answer

High School Diploma

Equal Futures Reporting

Percent of Accepted Applicants from Total Applicants by Gender, FY 2011 - 2016



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Equal Futures Reporting

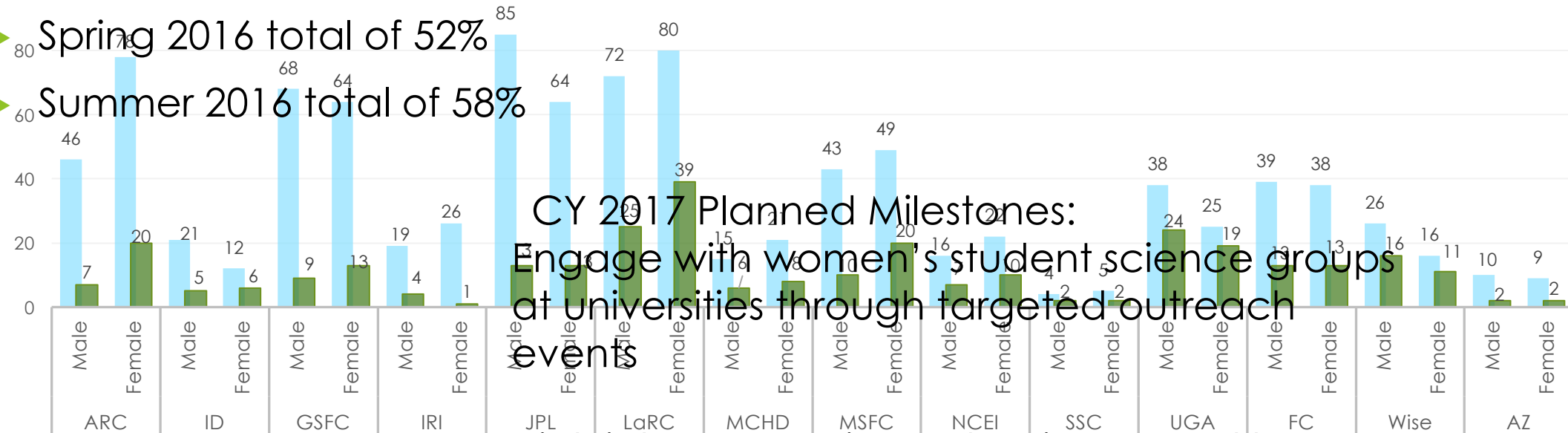
Total Applicants for FY 2016: 511 females and 500 males.

FY 2016 total of 54% female participants, of leadership positions filled by women

► Fall 2015 total of 53%

► Spring 2016 total of 52%

► Summer 2016 total of 58%



CY 2017 Planned Milestones:

Engage with women's student science groups at universities through targeted outreach events

Highlight women in earth science and host events and activities for International Women's day and Women's History Month

DEVELOP NODES

Applications Submitted Final Participants

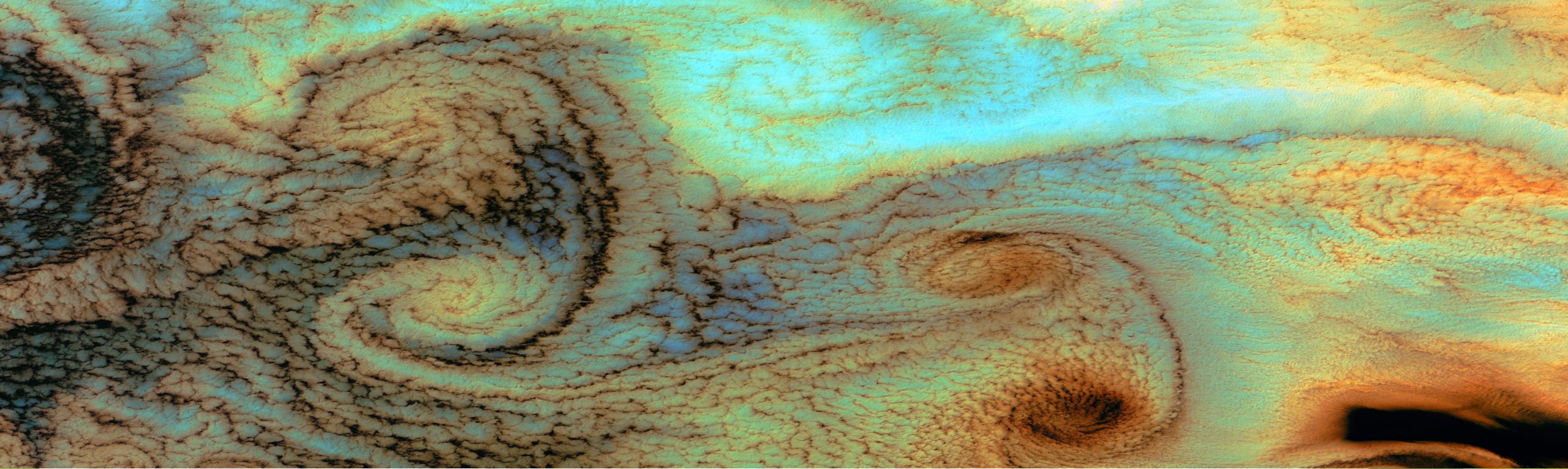
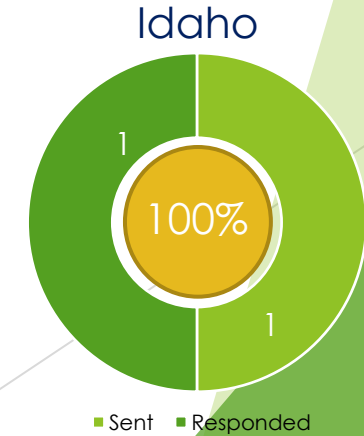
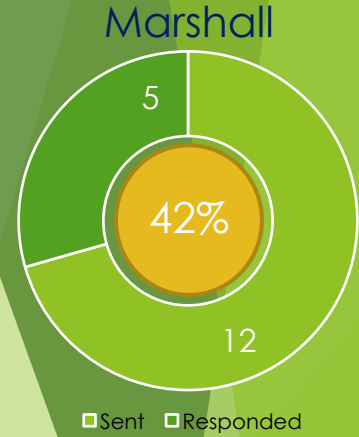
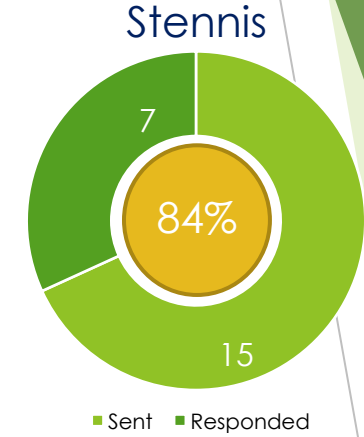
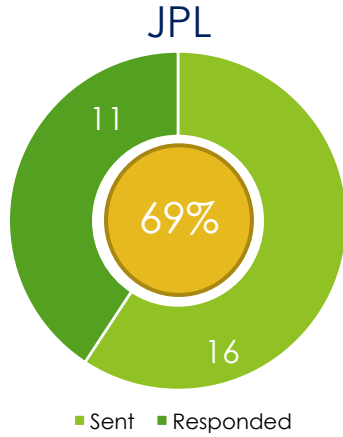
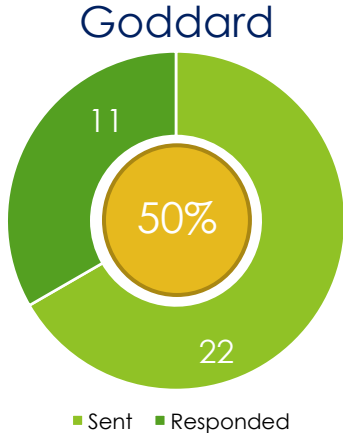
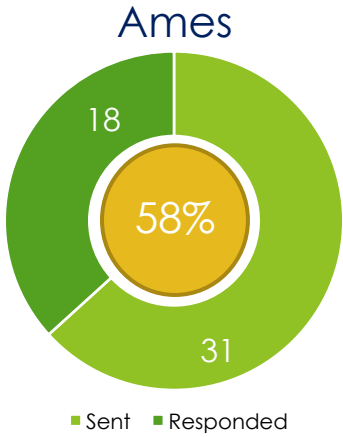
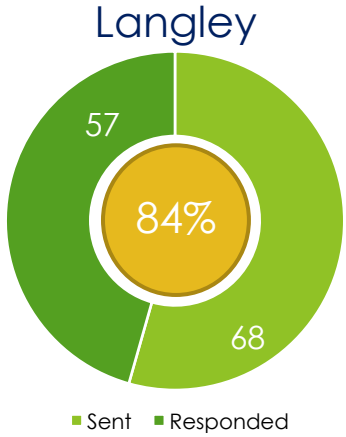


Image Credit: NASA

Participants- Alumni



CY16 Survey: Sent vs Responses

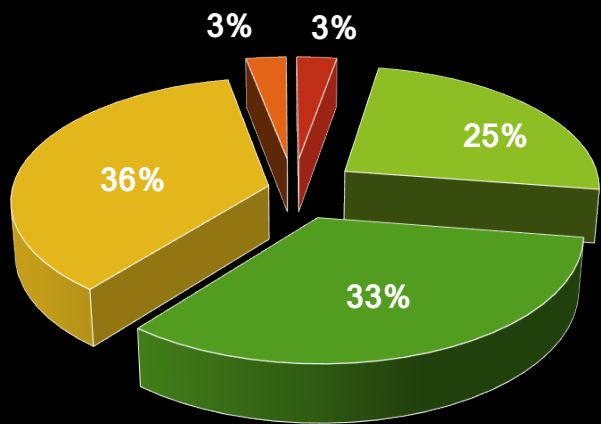


Current Alumni Employment



Alumni Career Paths

■ Academia ■ Government ■ Private
■ NASA ■ International



Industries

- 17 Alumni in Academia
- 23 Alumni in Government
- 25 Alumni in Private Sector
- 2 Working with NASA
- 2 Working in International Fields

"DEVELOP provided me with the opportunity to apply my school knowledge to real-life examples, meet individuals with similar interests, network with a wide range of partners and scientists, and gain leadership experience that I would not have had the opportunity otherwise at such an early time in my career. The program allowed me to develop both technical and professional skills that I can take with me in my career. I will always be incredibly grateful for my time with DEVELOP."

- **Rebekke Muench** [Regional Science Associate, SERVIR]

Academia

- Harvard University
- University of Michigan
- Research Scientists
- Teaching Assistant
- Professor

Private

- Hospitals
- Consultants
- Apple Inc
- Digital Harvest
- Facebook

Government

- Census Bureau
- Metropolitan Area Planning Council
- NOAA/NWS
- USDA Forest Service

NASA

- USAID SERVIR
- JPL

International

- Federal Education Department of Pakistan
- Genesis Consultancy in Nepal

2017 Alumni Collaboration Plans



Image credit: NASA

Impact Analysis & Communication Fellows' Goals:

- Lay Groundwork for Alumni Coverage Map
- Arrange Virtual Brown Bags
- Strengthen DEVELOP Ambassador Corp
- Lay Groundwork for DEVELOP's 20th Anniversary

Immediate Actions:

- Updating CY2017 Alumni Survey
- Creating Email template for Alumni engagement opportunities
- Creating recruitment materials for Alumni

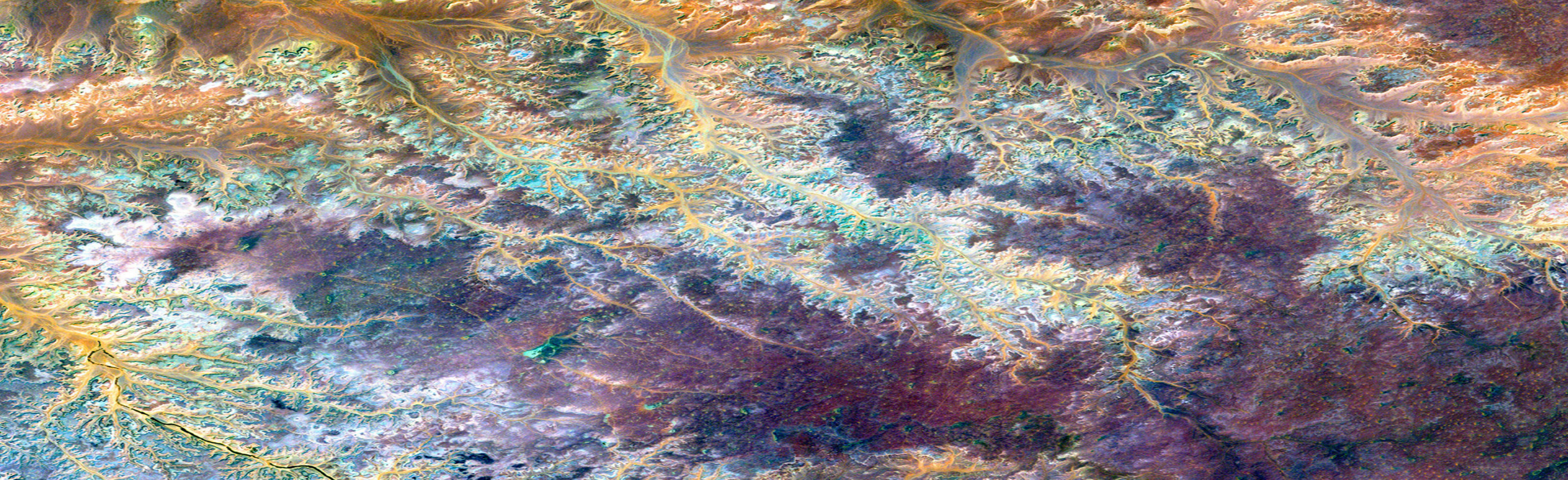


Image Credit: NASA

Partners



Partners

- ▶ Partner Tracking – master spreadsheet of partners
- ▶ Used for compiling stats about partners and keeping track of Pre & Post Forms to send

- ▶ Pre & Post Forms – the “standardized” questionnaires
- ▶ Given to all end users and boundary orgs
- ▶ Provides a point of comparison across a partnership, as well as across projects
- ▶ Goal: Follow up with more partners
- ▶ Short Summaries of impacts for projects featuring partner quotes and experiences

Continued Project?	Term	Status	Planned to Continue?	Node	Project	Partner
					Elkhorn Slough Eco Forecasting II	Elkhorn Slough National Estuarine Research Reserve (ESNERR)
Yes (Su 2016)	Fall 2016	No	ARC	Elkhorn Slough Eco I	USGS, Western Geographic Science Center	
Yes (Su 2016)	Fall 2016	No	ARC	Narapa National Climate III	Nevada National Department of Water Resources, Water Management Branch II	
Yes (Spr 2015, Su 2015)	Fall 2016	No	ARC	Narapa National Climate III	USDA Natural Resources Conservation Services (NRCS)	
Yes (Spr 2015, Su 2015)	Fall 2016	No	AZ	Maricopa Health & Air Quality II	Maricopa County Air Quality Department (MCAQD)	
Yes (Su 2016)	Fall 2016	No	AZ	Maricopa Health & Air Quality II	Maricopa County Department of Public Health	
Yes (Su 2016)	Fall 2016	No	FC	Ethiopia Disasters	USGS, North Central Climate Science Center	
No	Fall 2016	No	FC	Ethiopia Disasters	US Department of State, Office of Space and Advanced Technology (DSO/ST) and Humanitarian Information Unit (HIU)	
No	Fall 2016	No	FC	Ethiopia Disasters	Maricopa County, Institute of Geo-Information and Earth Observation Sciences (IGES)	
No	Fall 2016	No	FC	Rocky Mountain National Park Climate	National Park Service, Rocky Mountain National Park	
No	Fall 2016	No	FC	Rocky Mountain National Park Climate	USGS, Fort Collins Science Center (FORT)	
No	Fall 2016	No	GSFC	Kam & Eco Forecasting	Global Environment Facility, Independent Evaluation Office (GEF IO)	
No	Fall 2016	Yes (Spr 2017)	GSFC	North Carolina Water Resources	Town of Cary, NC	
No	Fall 2016	Yes (Spr 2017)	GSFC	North Carolina Water Resources	University of Guelph	
No	Fall 2016	Yes (Spr 2017)	GSFC	North Carolina Water Resources	Hazen and Sawyer P.C.	
No	Fall 2016	Yes (Spr 2017)	ID	Southeastern Idaho Water Resources	NASA RECOVER Science Team	
No	Fall 2016	Yes (Spr 2017)	ID	Southeastern Idaho Water Resources	Idaho Department of Water Resources (IDWR)	
No	Fall 2016	Yes (Spr 2017)	ID	Southeastern Idaho Water Resources	Bureau of Land Management, Pocatello field office (BLM)	
No	Fall 2016	No	JPL	Coastal Rica Agriculture II	EARTH University	
No	Fall 2016	No	JPL	Southern Arizona Eco Forecasting	USGS, Southwest Biological Science Center	
Yes (Su 2016)	Fall 2016	No	JPL	Southern Arizona Eco Forecasting	Northern Arizona University (NAU)	
Yes (Su 2016)	Fall 2016	No	JPL	Southern Arizona Eco Forecasting	National Park Service, Saguaro National Park, Rincon Mountain District	
No	Fall 2016	No	JPL	Southern Arizona Eco Forecasting	National Park Service, Migration and Adaptation Research Institute (OU-MARI)	
No	Fall 2016	No	JPL	Southern Arizona Eco Forecasting	Old Dominion University, Everglades National Park (ENP)	
No	Fall 2016	No	LARC	Everglades Eco Forecasting II	National Park Service, Glacier National Park (GEO BPI)	
Yes (Su 2016)	Fall 2016	No	LARC	Everglades Eco Forecasting II	Group on Earth Observations, Blue Planet Initiative (GEO BPI)	
Yes (Su 2016)	Fall 2016	No	LARC	Everglades Eco Forecasting II	NASA Ames Research Center, Biospheric Branch	
Yes (Su 2016)	Fall 2016	No	LARC	Glacier National Park Climate	National Park Service, Glacier National Park	
Yes (Su 2016)	Fall 2016	Yes (Spr 2017)	LARC	Glacier National Park Climate	National Park Service, Inventory & Monitoring Program, Northern Colorado Plateau and	
No	Fall 2016	Yes (Spr 2017)	LARC	Wellness U.S. Water Resources II		
No	Fall 2016	No	LARC			
No	Fall 2016	No	LARC			
No	Fall 2016	No	LARC			

**DEVELOP Post-Project Follow-Up
Summer 2016**

We would like to ask you about your experience with DEVELOP and your use of NASA remote sensing data (5-10 minutes). This will help us assess our progress in promoting the use of NASA data and in building capacity in our partners. Your partnership and time spent working with DEVELOP is greatly appreciated!

* **Required**

Your Organization: *

Your answer _____

Which DEVELOP project were you involved with? *

Your answer _____

Which DEVELOP location were you working with? *

Choose _____

Had your organization previously used any remotely sensed NASA data (either spaceborne or airborne) in your decision making and management practices before working with DEVELOP? *

☐ Yes - Frequently

☐ Yes - Infrequently

Pre-Project Partner Form (Summer 2016)

We would like to ask you about your use of remote sensing data prior to the start of our project (5-10 minutes). This will help us assess our progress in promoting the use of NASA data and in building capacity in our partners. Your partnership and time spent working with DEVELOP is greatly appreciated!

* Required

Name: _____
Your answer

Your Organization: *
Please be specific (e.g. "USDA Agricultural Research Service" instead of "USDA")

Your answer

Which DEVELOP project are you involved with? *

Your answer

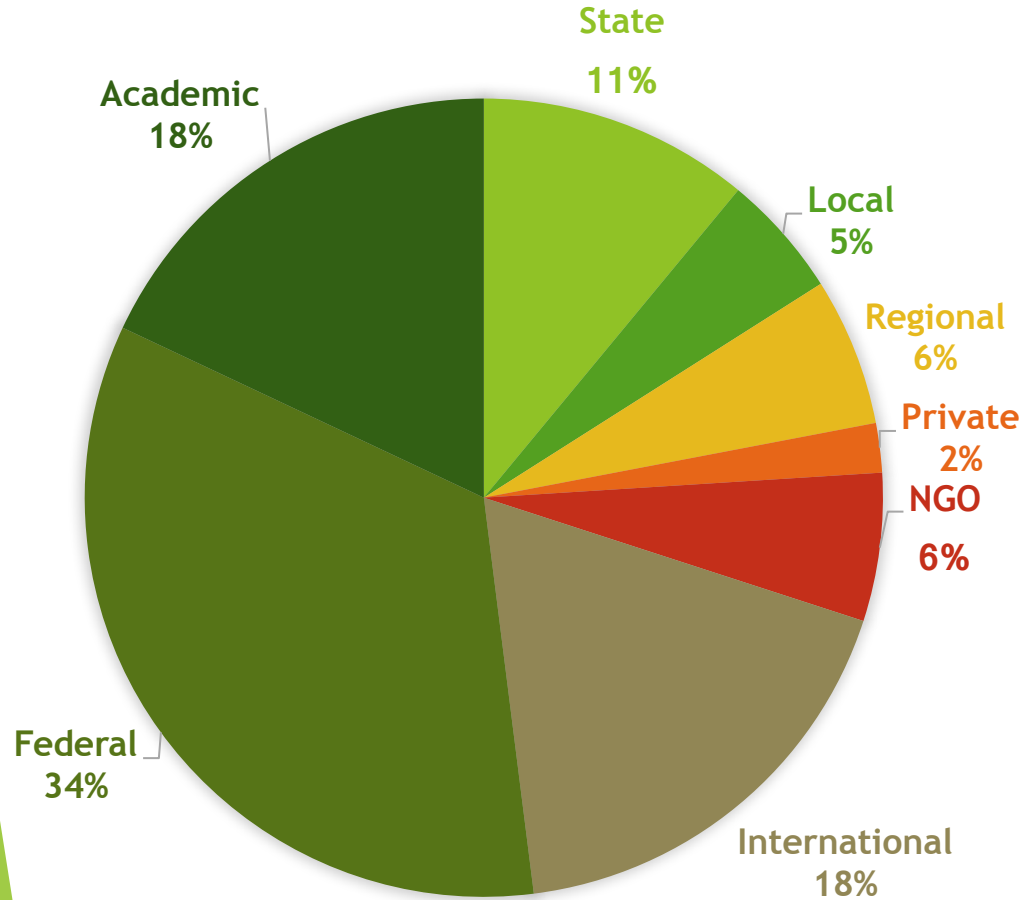
Which DEVELOP location are you working with? *

Choose

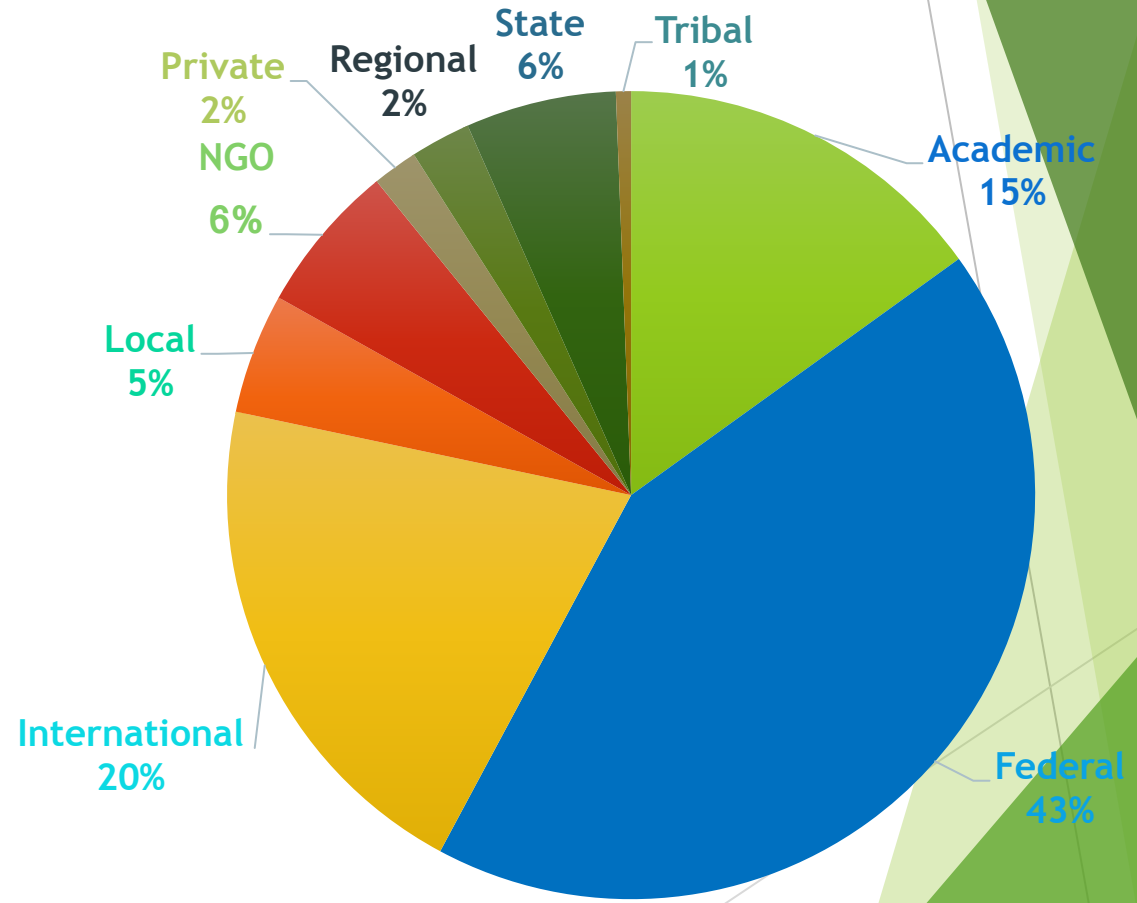
Does your organization currently use any remotely sensed

Partner Stats

FY2016



CY2016



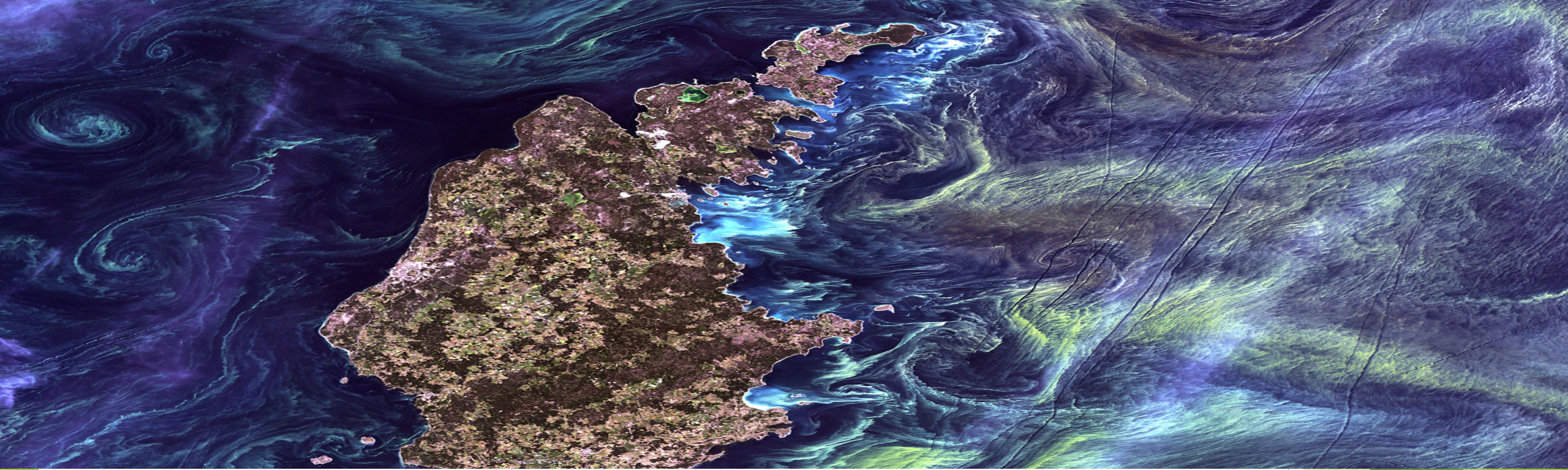


Image Credit: NASA

Projects



Indicator Tracking

- ▶ Tracking metrics are used to inform DEVELOP's results framework. These indicators are how can we show, or measure those how successful we are at achieving desired results.
- ▶ Statistics are used in several ways including:
 - DEVELOP Results indicator Framework
 - Summary Stats for yearly reports
 - Partner Verification

Project Strength Index (PSI)

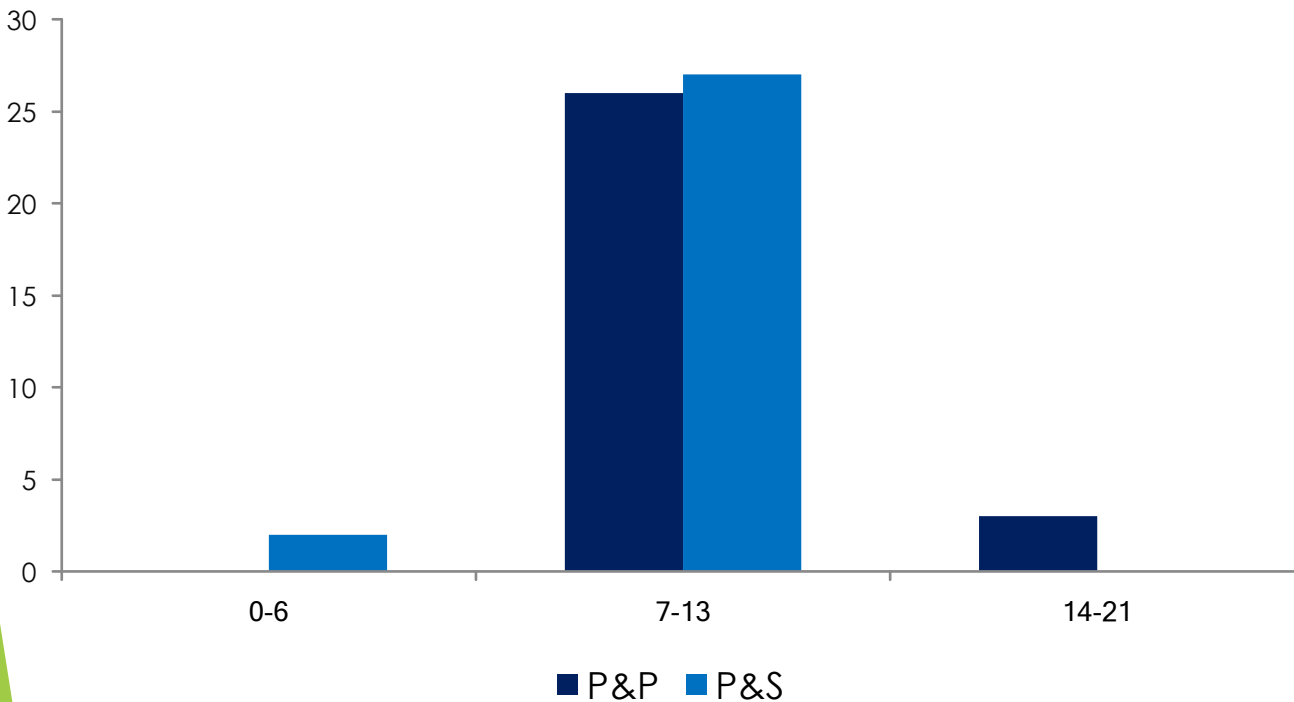
- The PSI provides an assessment of a project's overall strength
 - Projects are scored by stages (1-5) based on scores in two categories
 - Scoresheets are provided to each node's Center Lead
- **New** PSI Part II will be given one term after the final term of a project
 - Enable a long term look at projects
 - Allow time for products to be utilized
 - Increase understanding of benefits to partners

PSI Score Calculation Table

		Policy & Partner		
		0-6	7-13	14-21
Platform & Science	0-6	Stage 1	Stage 2	Stage 3
	7-13	Stage 2	Stage 3	Stage 4
	14-21	Stage 3	Stage 4	Stage 5

Summer 2016 Preliminary PSI Results

Project Scores by Section



Summer PSI Part I Results

Prelim Stage	# of Projects
1	0
2	2
3	24
4	3
5	0

- The majority of projects are stage 3
- The graph breaks up scores by category (Policy & Partner and Platform & Science)

Upcoming: IA Projects

- ▶ 1. Impact analyses of several past projects
 - ▶ Develop questions and interview past partners
 - ▶ Create a framework to conduct these analyses to determine benefits of DEVELOP projects



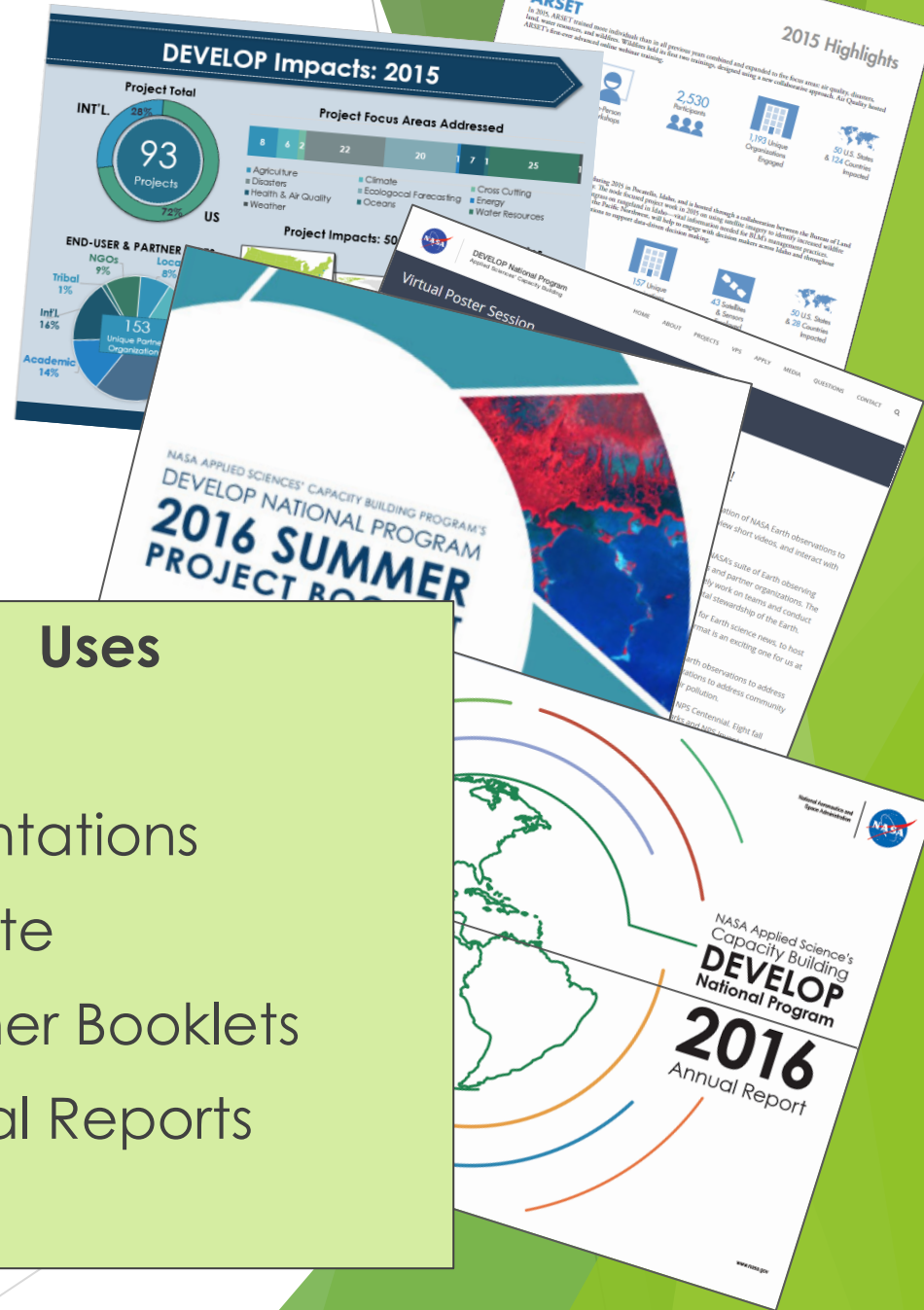
Our Stats Are Everywhere!

Stats

- ▶ Participants
 - ▶ Age
 - ▶ Education
 - ▶ Race/ Ethnicity
 - ▶ Gender
- ▶ Partners
 - ▶ Type
 - ▶ Organization
- ▶ Projects
- ▶ Etc.

Uses

- ▶ Flyers
- ▶ Presentations
- ▶ Website
- ▶ Summer Booklets
- ▶ Annual Reports
- ▶ Etc.



Thanks!

