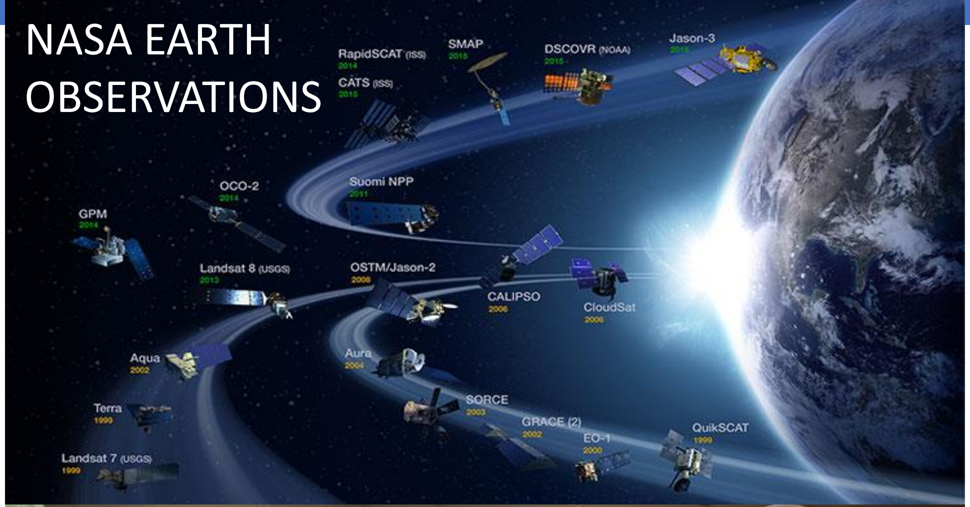
Utilizing NASA Earth Observations to Monitor Salinity in Coastal Alabama Waters

DEVELOP
National Program

What is DEVELOP?

DEVELOP, part of NASA's Applied Sciences Program, addresses environmental and public policy issues through interdisciplinary feasibility projects that apply the lens of NASA Earth observations to community concerns around the globe.

DEVELOP is a dual-capacity building program:
Partners & Participants



DEVELOP Organization Chart

NASA Administrator

Science Mission Directorate

Earth Science Division

Applied Sciences Program

Capacity Building Program

DEVELOP National Program

DEVELOP National Program Office – *NASA Langley*

NASA Center Nodes

1. NASA Ames — *Moffett Field, CA*
2. NASA Goddard — *Greenbelt, MD*
3. NASA JPL — *Pasadena, CA*
4. NASA Langley — *Hampton, VA*
5. NASA Marshall — *Huntsville, AL*

Regional Nodes

6. Maricopa County Dept. of Public Health @ ASU — *Tempe, AZ*
7. USGS @ Colorado State University — *Fort Collins, CO*
8. BLM @ Idaho State University — *Pocatello, ID*
9. Mobile County Health Department — *Mobile, AL*
10. NOAA @ National Centers for Environmental Information — *Asheville, NC*
11. University of Georgia — *Athens, GA*
12. Wise County Clerk of Court's Office — *Wise, VA*

NASA's Applied Sciences Program

Discovering Innovative & Practical Applications of NASA Earth Science

National Application Areas

Health & Air Quality

Disasters

Water Resources

Ecological Forecasting

Oceans

Energy

Agriculture

Climate

Weather

Capacity Building

ARSET

DEVELOP

SERVIR

Applied Sciences Program Website: http://appliedsciences.nasa.gov/

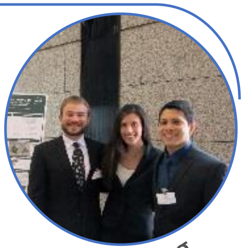
Who Participates in DEVELOP?

Participants

Recent Graduates

Military Personnel

Students



Transitioning Professionals

Advisors

NASA Researchers

Partner Organizations

Decision Makers

State & Local Govt.

Federal Agencies

NGOs

International

Who Participates in DEVELOP?

Spring 2016

109 DEVELOPers
working on
***26 Projects** with*
57 Partners & End-Users

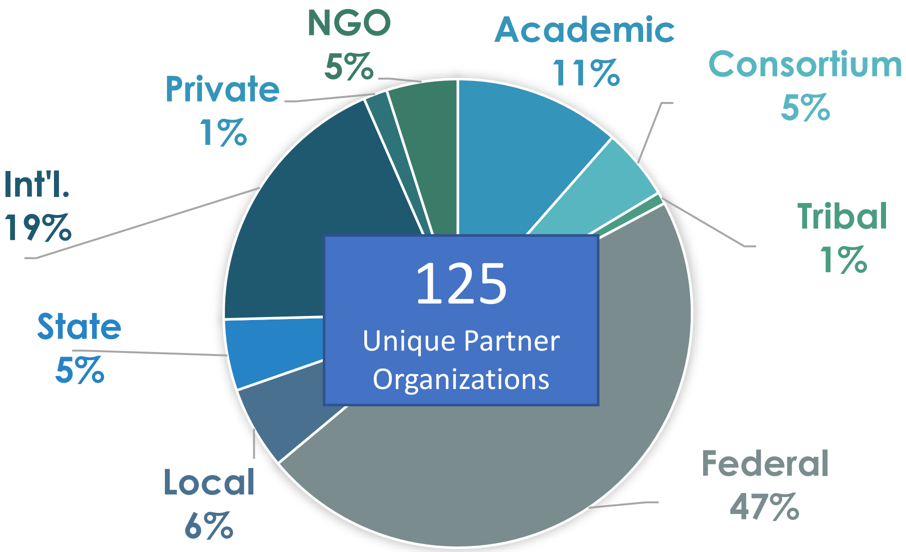
Summer 2016

137 DEVELOPers
working on
***30 Projects** with*
71 Partners & End-Users

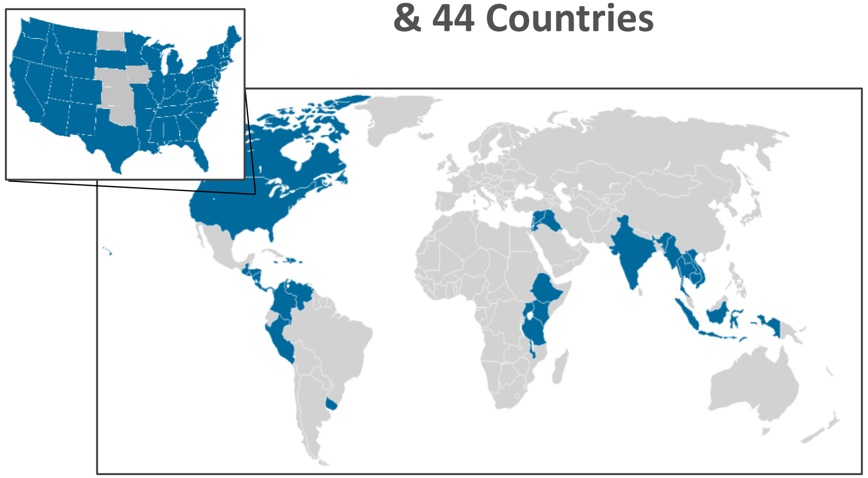
Fall 2016

113 DEVELOPers
working on
***21 Projects** with*
42 Partners & End-Users

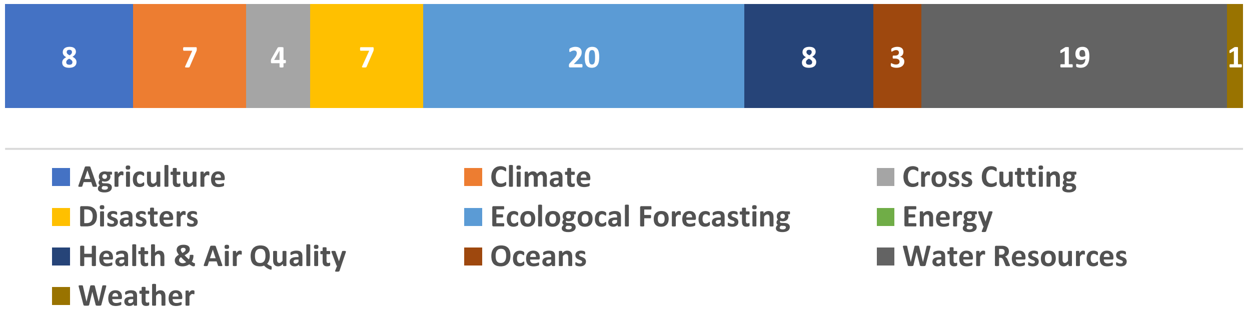
END-USER & PARTNER TYPES



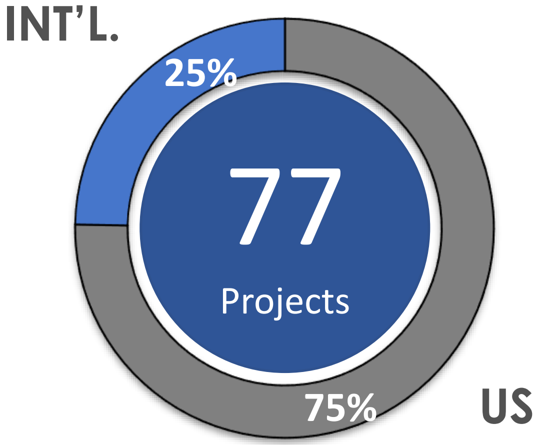
Project Impacts: 42 US States & 44 Countries



Project Focus Areas Addressed



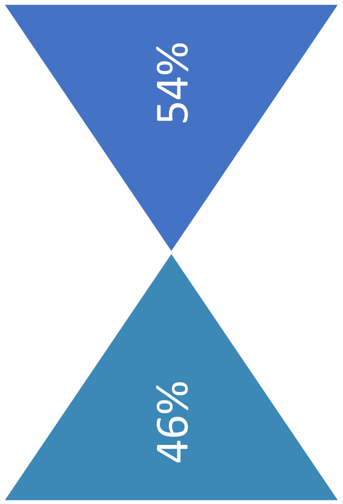
Project Total

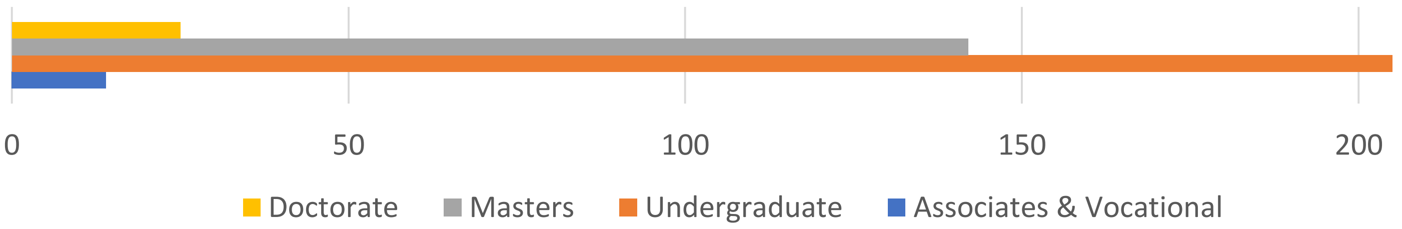


Who are DEVELOPers?

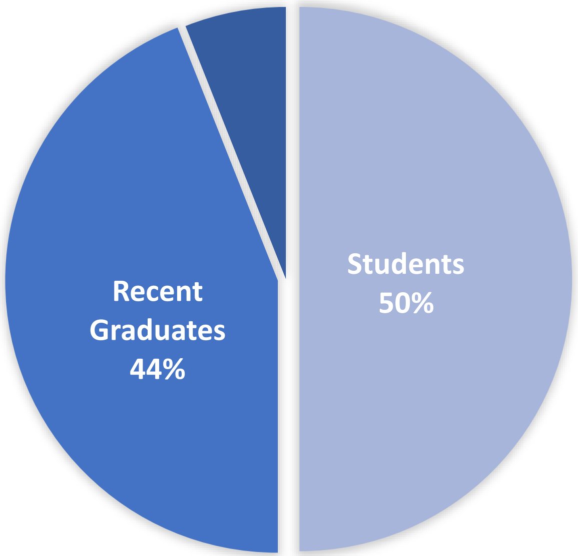
Eligibility Requirements:

- 18 and older
- Interested in Earth science & remote sensing
- US citizenship for NASA Centers





359 PARTICIPANTS in 2016



2017 Spring Portfolio

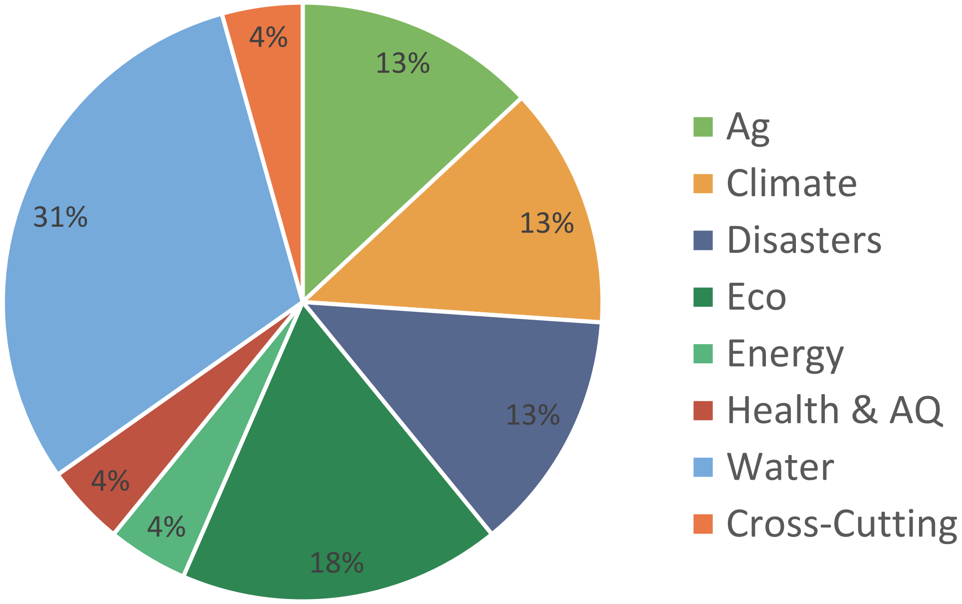
1st TERM (17)

2nd TERM (6)

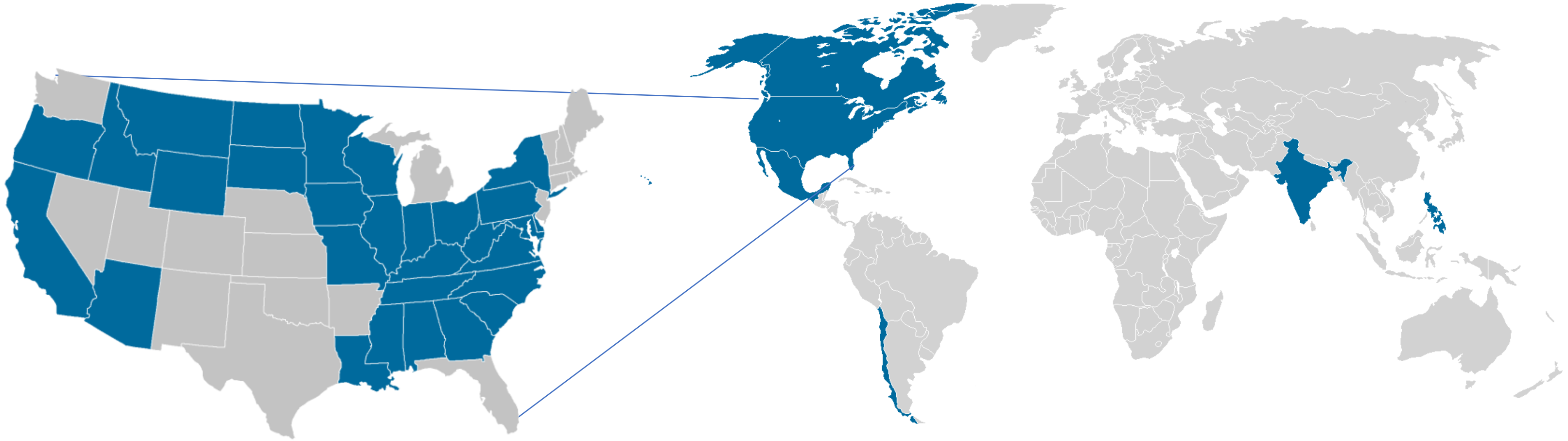
23 Projects

87% Domestic 13% International

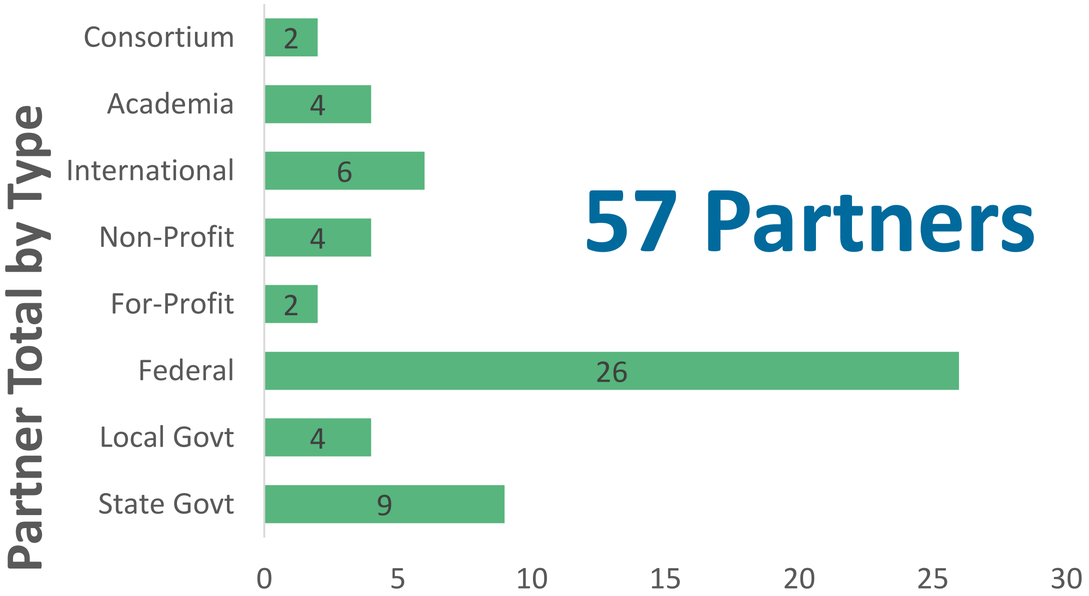
Application Areas Addressed



30 States & 6 Countries Impacted



57 Partners



DEVELOP

Project in the Works

Coastal Alabama Oceans

Project Overview:

This project aims to address changing coastal ecosystems by creating habitat suitability products for the Mobile Bay and Mississippi Sound area along the Gulf Coast. NASA Earth observations will be utilized to determine the best way to detect salinity, turbidity, sea-surface temperature levels around the coast.

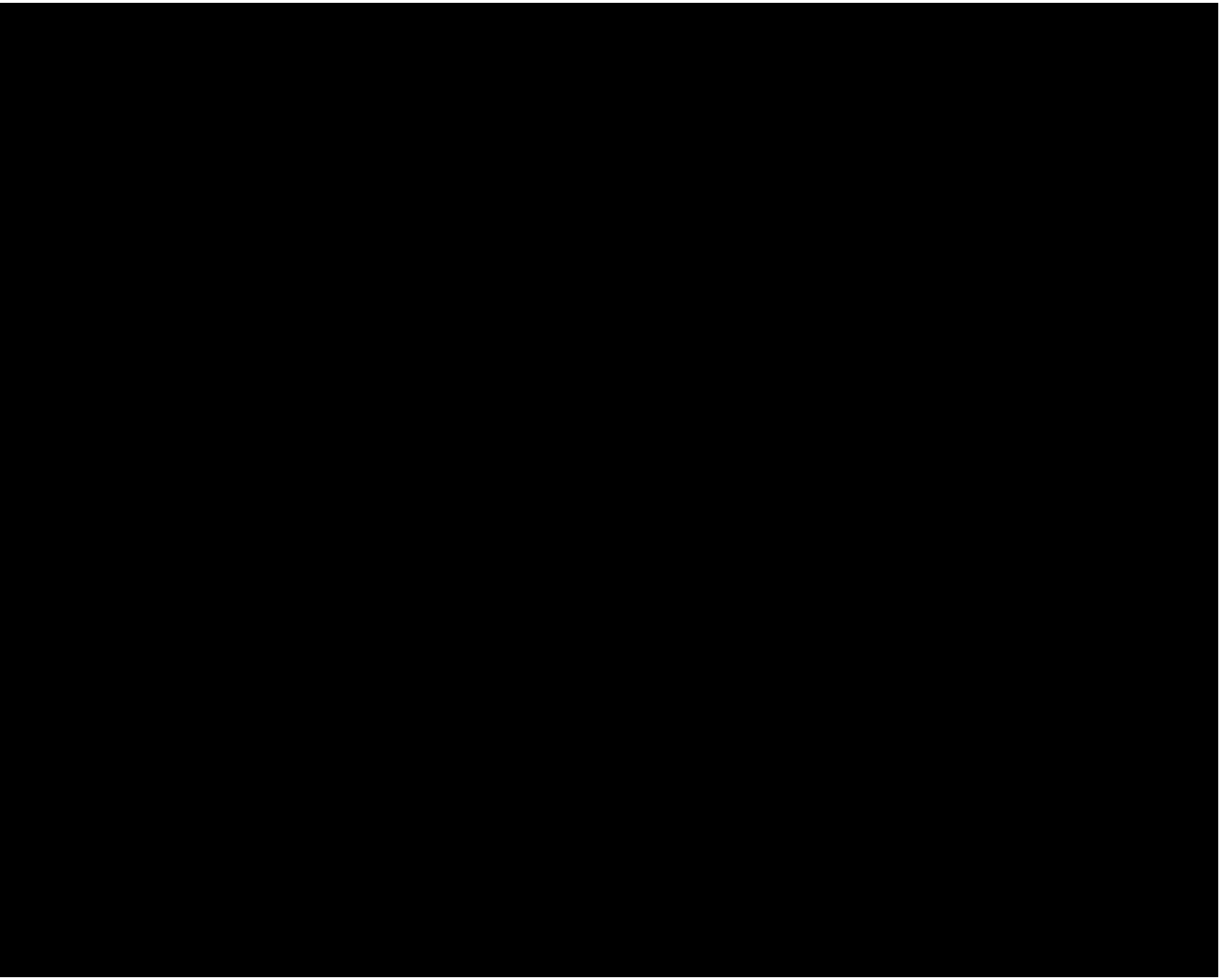
Coastal Alabama Oceans

Project Timeline:

10 week term

June 5th-August 11th

Coastal Alabama Oceans



Earth observations being used:

- Aqua MODIS
- Suomi NPP VIIRS
- Landsat 8 OLI & TIRS
- Sentinel-2 MSI

Coastal Alabama Oceans

Project End-Products:

- •Coastal Salinity Algorithm with Aqua MODIS
- •Coastal Salinity Algorithm with Suomi NPP VIIRS
- •Sea Surface Temperature Time Series Analysis
- •Turbidity Time Series Analysis
- •Habitat Suitability Maps

Coastal Alabama Oceans

Ways to Collaborate:

- Relevant Datasets
- Specialized Science Advising
- Field Work Opportunities

Questions

Contact Info:

Dashiell Cruz:
Dashiell.s.cruz@nasa.gov

Tyler Lynn:
Tyler.c.lynn@nasa.gov