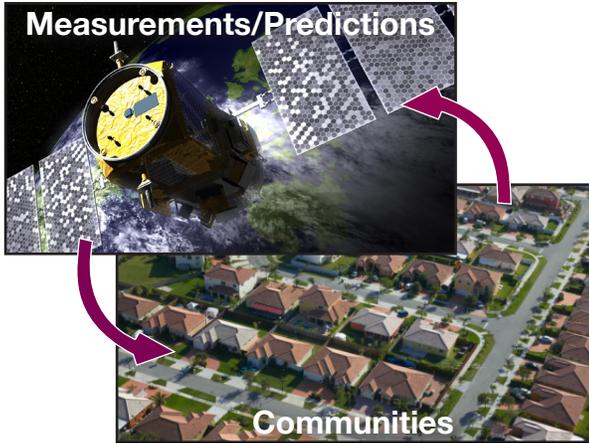




NASA Applied Sciences

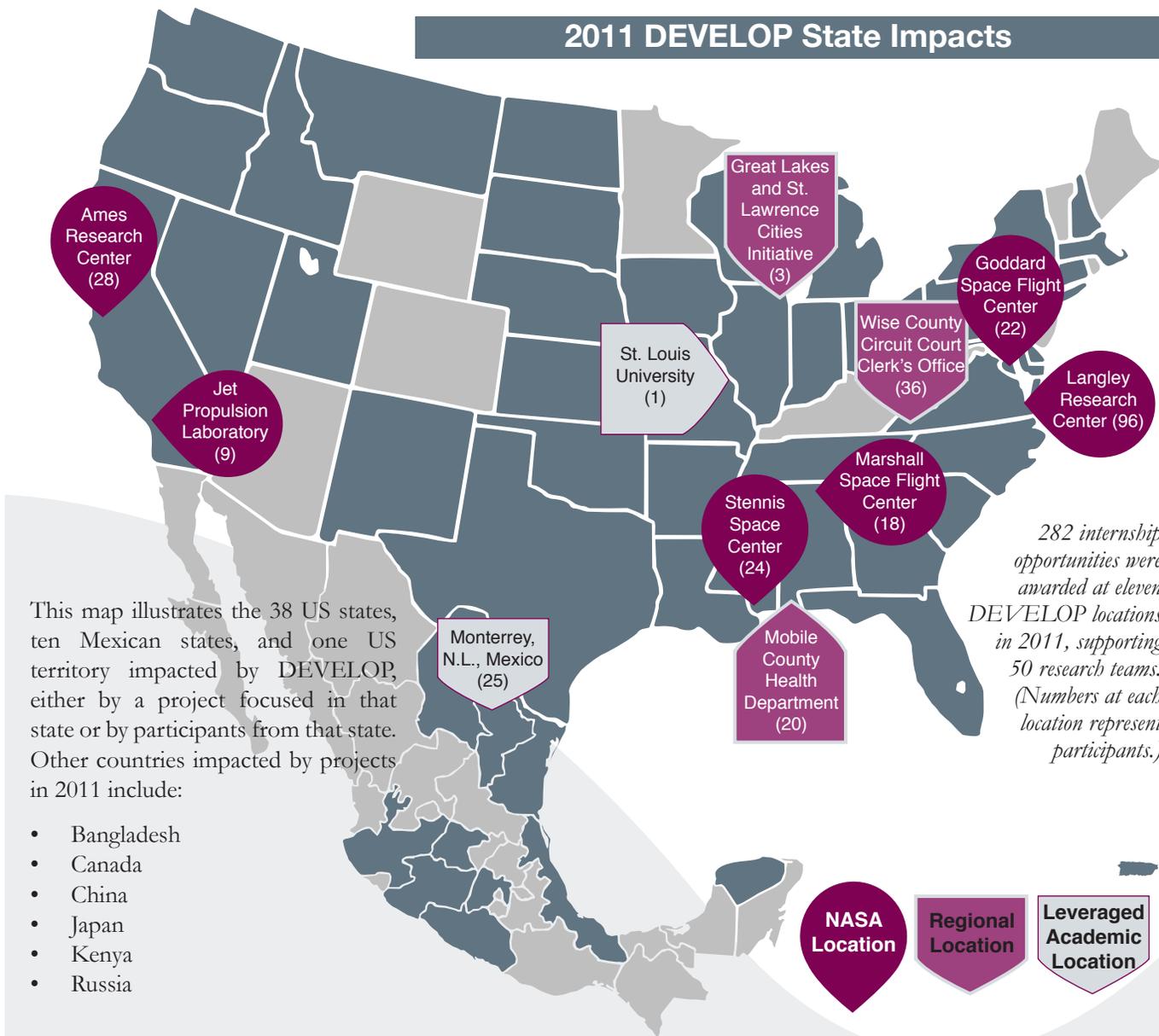
# DEVELOP National Program



DEVELOP is a NASA Science Mission Directorate Applied Sciences training and development program that engages students and young professionals to utilize NASA Earth observing sources and apply them to community environmental concerns. Advisors from NASA and partner organizations assist participants in applying Earth science research to conduct projects that support state and local government policy-makers. Projects align with Applied Sciences' National Application Areas and demonstrate how NASA data can enhance decision support systems.

2011 program highlights

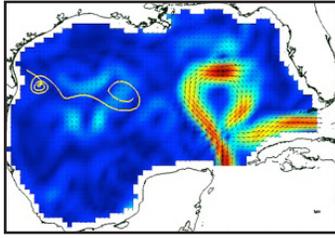
## 2011 DEVELOP State Impacts



This map illustrates the 38 US states, ten Mexican states, and one US territory impacted by DEVELOP, either by a project focused in that state or by participants from that state. Other countries impacted by projects in 2011 include:

- Bangladesh
- Canada
- China
- Japan
- Kenya
- Russia

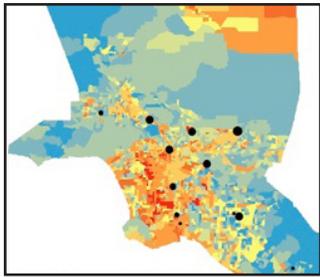
## Featured Projects



### Gulf of Mexico Ecological Forecasting (Stennis)

Partnered with NOAA's Marine Debris Division to establish a methodology for utilizing Earth observations to monitor the Gulf of Mexico Loop Current and track marine debris dispersal in coastal areas.

**Midwest Agriculture (Langley)** - Established a methodology for the USDA to use NASA's EO-1 Hyperion sensor to remotely monitor tillage practices for efficient and accurate carbon accounting purposes and improved crop production systems management and practices.



### Los Angeles Health (Jet Propulsion Laboratory)

Identified areas most vulnerable to air pollution exposure and analyzed air quality monitoring capabilities using NASA's MISR instrument onboard Terra for city officials in the Los Angeles metropolitan area.

**Central Valley Water (Ames)** - Utilized NASA's GRACE mission to remotely measure changes in total water storage to enhance modeling capabilities of the California Department of Water Resources and aid in improved water resource management.



For more information about DEVELOP, go to <http://develop.larc.nasa.gov>

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## Featured News and Events

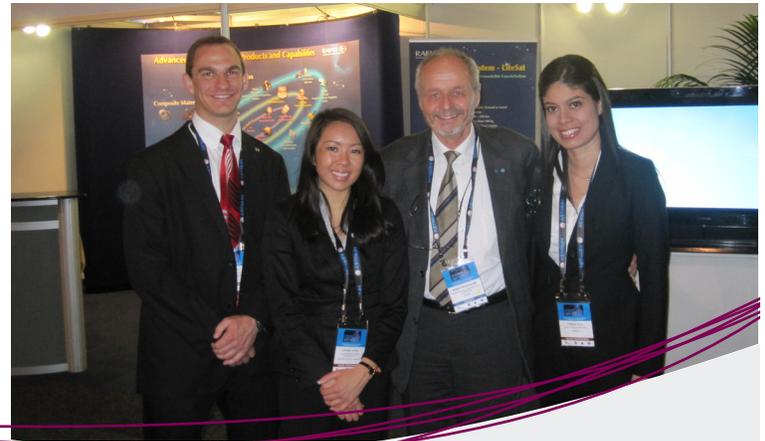
DEVELOP received a NASA Group Achievement Award in recognition of outstanding accomplishments in the training and development of students and early career professionals to extend NASA Earth science research results to society.



Longtime science advisor and mentor to the Ames DEVELOP team, Dr. Joseph Skiles, left his role with DEVELOP to pursue new opportunities at NASA Ames Research Center. To celebrate his many contributions over the years, he was presented with a commemorative plaque at NASA Headquarters.

Three DEVELOP young professionals were selected to participate in the International Astronautical Congress Youth Plenary in Cape Town, South Africa. They are pictured here with International Astronautical Federation President Dr. Berndt Feuerbacher.

(L to R): Jason Jones, Katrina Laygo, Dr. Feuerbacher, Vanessa Villa.



DEVELOP participants demonstrated project research at over 20 international, national, state, and regional conferences in 2011. These included posters, oral presentations, and presentation proceedings papers at conferences such as the Great Lakes and St. Lawrence Cities Initiative Annual Meeting and Conference, Gulf of Mexico Alliance Implementation and Integration Workshop, Council of State Governments National Conference, International Astronautical Congress, and the American Meteorological Society Annual Conference. These presentations provided participants with experience in communicating scientific results to a variety of audiences, establishing new partnerships, and researching potential project ideas. DEVELOP also successfully communicated project results and benefits of the program through a series of articles in *The Earth Observer* and

*Earthzine*, including "virtual poster sessions" at the conclusion of each term hosted by *Earthzine*. Additionally, DEVELOP established a new node at St. Louis University in St. Louis, Missouri. In 2012, DEVELOP will expand with two more nodes located in Ft. Collins, Colorado and Salt Lake City, Utah. DEVELOP will also continue to work towards new international partnerships.