

NASA Center Locations

1. NASA Ames Research Center – Moffett Field, CA
2. NASA Goddard Space Flight Center – Greenbelt, MD
3. NASA Jet Propulsion Laboratory – Pasadena, CA
4. NASA Langley Research Center – Hampton, VA
5. NSSTC at NASA Marshall Space Flight Center – Huntsville, AL
6. NASA Stennis Space Center – Stennis, MS

Regional Locations

7. International Research Institute for Climate and Society – Palisades, NY
8. Mobile County Health Department – Mobile, AL
9. NOAA National Climatic Data Center – Asheville, NC
10. Patrick Henry Building – Richmond, VA
11. University of Georgia – Athens, GA
12. USGS at Colorado State University – Fort Collins, CO
13. Wise County and City of Norton Clerk of Court's Office – Wise, VA

International Location

14. International Centre for Integrated Mountain Development – Kathmandu, Nepal



DEVELOP National Program

Applied Sciences' Capacity Building

What is DEVELOP?

About DEVELOP

DEVELOP addresses environmental and public policy issues through interdisciplinary research projects that apply the lens of NASA Earth observations to community concerns around the globe. Bridging the gap between NASA Earth Science and society, DEVELOP builds capacity in both participants and partner organizations to better prepare them to address the challenges that face our society and future generations.

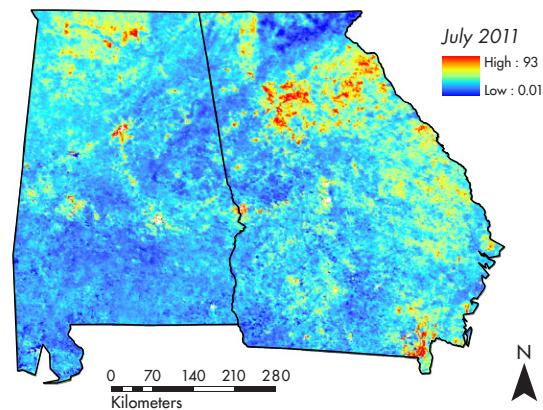
Teams of DEVELOP participants partner with decision makers to conduct rapid feasibility projects that highlight fresh applications of Earth observing missions, cultivate advanced skills, and increase understanding of NASA Earth Science data and technology.

About Projects

DEVELOP projects apply Earth observations and remote sensing technology to the application areas of *Agriculture, Climate, Disasters, Ecological Forecasting, Energy, Health & Air Quality, Oceans, Water Resources,* and *Weather*. These projects highlight NASA Earth observation capabilities relative to environmental issues for enhanced policy and decision-making to improve life here on Earth.

Highlighted Project – Southeast United States Water Resources

Monthly Potential Evapotranspiration (cm)



In 2012, drought impacted crop fields in the Midwest and southwestern United States making the western U.S. water scarcity a high priority concern, and increasing the need for the southeastern U.S. to develop more sustainable irrigation practices. Understanding and monitoring evapotranspiration is beneficial in determining areas more prone to drought and plays a vital role in determining the effects of climate on agricultural ecosystems. This project developed an easily accessible tool to monitor drought via drought indices and calculate Arid Index (AI). This tool allows areas of high productivity to be mapped in order to increase crop yields. Corn, the largest crop in terms of production and consumption, is also a high priority. The Vegetation Drought Index (VDI) was used to monitor agricultural drought in corn fields and was derived from Terra and Aqua MODIS data from 2008 to 2013. Monthly precipitation and potential

evapotranspiration were utilized to evaluate the potential water input and output of the soil. The purpose of this project was to assist end-users such as the USGS Georgia Water Science Center in developing a more efficient water withdrawal monitoring system, which in turn will protect future economic endeavors and promote more sustainable irrigation practices.



How to Get Involved

...as a DEVELOP Participant

Anyone 18 and over who is interested in pursuing experience in the Earth sciences and remote sensing, including currently enrolled students, recent college graduates, early and transitioning career professionals, and current and former U.S. Military service members are eligible to apply. Applicants must have a minimum 3.0 GPA on a 4.0 scale at their current or last institution of higher learning, and the ability to transport themselves to and from the DEVELOP location.

- ▶ **U.S. Citizens** — Eligible to apply to all DEVELOP locations.
- ▶ **International Applicants** — Foreign nationals who are currently enrolled or recently graduated from a U.S. accredited university are eligible to apply to DEVELOP's regional locations, but not NASA Center locations. Acceptances for foreign nationals are conditional upon proof of a valid visa, I-20 form, and an approved CPT/OPT that will allow them to legally work within the United States. Applicants who do not meet these requirements are not eligible to participate.

Apply online at <http://develop.larc.nasa.gov/apply.html>

...as a DEVELOP End-User/Partner

Any organization that is making decisions related to environmental concerns and is interested in incorporating NASA Earth observations into that decision making process is welcome to contact DEVELOP to discuss potential collaboration. For more information on partnering with DEVELOP, please visit the DEVELOP website's Partner page at <http://develop.larc.nasa.gov/partners.html>

...as a DEVELOP Advisor

A broad spectrum of advising supports DEVELOP projects, ranging from remote sensing experts to specialists relating to specific project topics. If you are interested in volunteering your time advising a DEVELOP project, please contact the DEVELOP National Program Office to discuss potential opportunities at NASA-DL-DEVELOP@mail.nasa.gov