National Aeronautics and Space Administration



DEVELOP YOUR DECISION

with NASA's Applied Sciences' Capacity Building DEVELOP National Program

Can NASA Satellite Data Help Your Organization?

Introduction to NASA Earth observation capabilities

Enhanced decision support tools

New methods to augment current practices

About Projects

What is 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 relevant applications of Earth observing missions, cultivate advanced skills, and increase understanding of NASA Earth science data and technology.

DEVELOP conducts feasibility projects that utilize NASA satellite and airborne observations in customized applications to demonstrate to decision makers the utility of remote-sensing data. These projects are focused on application areas including:



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Health & Air Quality



Transportation & Infrastructure





Urban Development



Forecastina



Agriculture

Energy

Why Partner with DEVELOP?

Build your organization's capacity to utilize NASA Earth science data and expand the tools and resources available when making decisions. DEVELOP teams conduct feasibility projects that identify methods, prepare and analyze preliminary results, and create a set of deliverables (technical paper, poster, presentation, video). The team then provides these deliverables to the partner organization at the culmination of the project. Following the project hand-off, partner organizations are empowered to self-sustainably use Earth observation data through the methods identified by DEVELOP. This can decrease data collection costs, streamline decision making, and fill in data gaps.

Have Questions?

Please contact us with any questions about the program at NASA-DL-DEVELOP@mail.nasa.gov.



Recent Project Example Miami-Dade

Ecological Forecasting

What are NASA **Earth Observations?**

Space is one of the best vantage points from which to study Earth. NASA satellites and airborne missions are continually collecting information about Earth's ocean, atmosphere, and land surfaces. This Earth observation imagery can be applied to environmental issues and provide decision Miami is a city of rapid and constant change, some of which is at the makers with new information to enhance their

expense of its neighboring wetland area, the Everglades. As the largest subtropical ecosystem in the United States, the Everglades are located along avian migratory routes and are home to many endemic plant and response. animal species. The protection and restoration of this region is critical, not only for ecological reasons, but also for the protection of water recharge resources for future urban water consumption by the 2.5 million residents of Miami-Dade County. The Miami-Dade County Parks, Recreation and Open Spaces Department has embarked on an ambitious planning effort, in partnership with The Trust for Public Land, to develop a Western Greenway system of trails and recreational destinations along the county's western edge. To assist with Greenway planning efforts, DEVELOP used NASA satellite imagery to derive a vegetation index and a land cover classification map which not only served as model inputs, but also provided tree cover parameters to support specific design and greenway alignment. The results identified the most suitable land for recreation, conservation, and agritourism, with a particular focus on the southern segment, where the majority of agricultural lands were located. This project contributed to decision support tools for planning green infrastructure corridors to preserve the Everglades.

Agriculture (Very Dense) Agriculture (Dense) Agriculture (Moderate) Agriculture (Sparse) Very Dense Vegetation Dense Vegetation Shrubs

Partner &

DEVELOP discuss

potential project &

develop a proposal based on

Partner needs

Pasture/Grass Wetlands (Wet Prarie) Wetlands (Glades Marsh) Sand Barren Impervious

NASA

reviews and

selects

propo<u>sals</u>

Water

"The NASA DEVELOP team provided valuable analysis, data, mapping, and field work to the Miami-Dade Western Greenway planning project. Their contributions assisted the decision-making process and were used to inform the greenway routing.

Alissa Turtletaub, Miami-Dade County Parks, Recreation and Open Spaces Department

Project Process

DEVELOP team conducts project with periodic Partner inputs and feedback throughout the course of the 10-week term

DEVELOP hands off project results and methods to Partner

Partner utilizes results & methods in decision-making process

How to Engage

DEVELOP collaborates with a wide variety of organizations (state and local governments, NGOs, federal agencies, international organizations, etc.) to conduct rapid feasibility projects focused on applying NASA Earth observations to environmental decision-making processes. DEVELOP is built on strong projects that stem from robust partnerships. The program seeks engaged partners who value scientific collaboration, and most importantly, regular communication during the short 10-week term.

Any organization interested in partnering with DEVELOP can contact the National Program Office and discuss potential project ideas by completing a project request form and submitting it through email. The form can be found online at https://develop.larc.nasa.gov/projects.php



www.nasa.gov NP-2017-09-000-LaRC

More About DEVELOP - DEVELOP.larc.nasa.gov