National Aeronautics and Space Administration

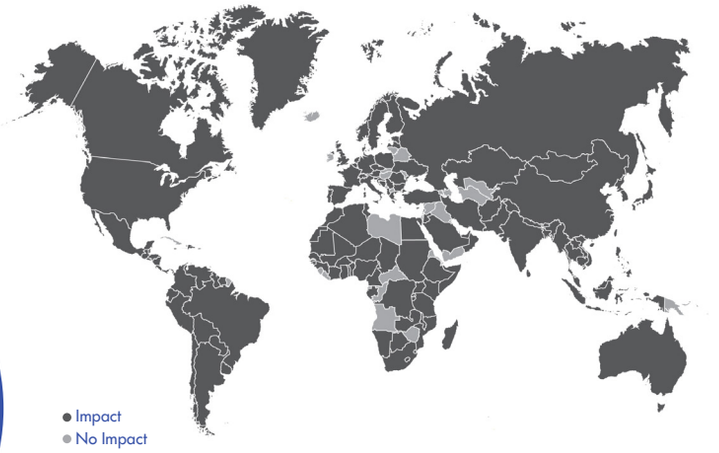
NASA Earth Science Division Applied Sciences'
Capacity Building Program

NASA satellite and airborne missions are continuously collecting information about the Earth's ocean, atmosphere, and land surfaces to support informed decisions and policies related to water resources, disasters, ecological forecasting, health & air quality, and agriculture & food security.

The Applied Sciences' Capacity Building Program engages current and future decision makers to enhance skill development and the capability to access and apply NASA Earth science to decision making in the US and developing countries. The program builds capacity within individuals and institutions through workforce development, training activities, and by partnering with decision makers through collaborative projects.

The Capacity Building Program works around the globe. In 2018, CBP provided 101 trainings and conducted 65 feasibility studies and 19 multi-year projects. These activities impacted all 50 US states and 143 countries.

2018 IMPACT



143 COUNTRIES IMPACTED

50 STATES IMPACTED

65
Feasibility Studies

101
In-person & Online Trainings

19
Multi-year Projects

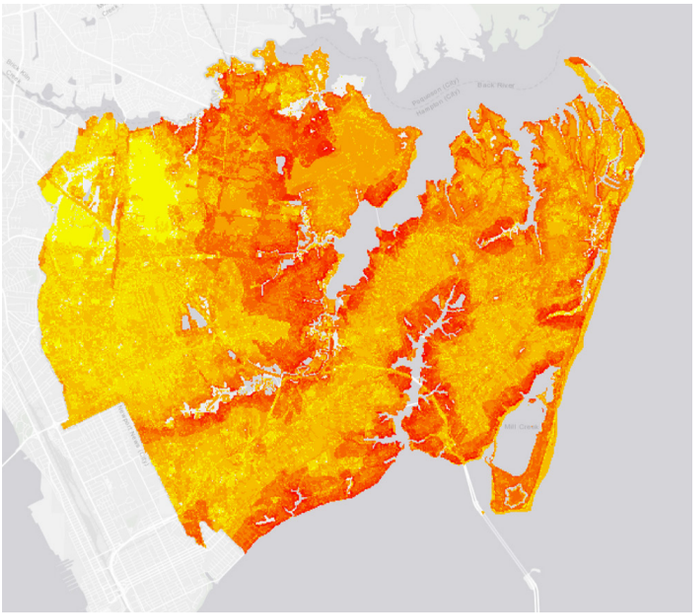
NP-2018-11-124-LaRC

Applied Sciences' Capacity Building Program
2018 Highlight Activities

Training

The Capacity Building Program is supporting users in the application of Earth observations to implement and monitor indicators for the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. ARSET trainings help people understand how to access and apply Earth science data, and the program has collected and organized its trainings within the framework of the 17 SDGs.

For more information on trainings related to SDGs, visit: https://arset.gsfc.nasa.gov/sdgs.



Feasibility Study

Situated at the mouth of the Chesapeake Bay, Hampton, Virginia is one of the most vulnerable areas in the United States for environmental stressors such as flooding, sea level rise, and storm surge. The city is engaged in several initiatives and partnerships to aggregate geospatial data to improve their coastal resilience planning. A DEVELOP feasibility study partnered with the City of Hampton to enhance visualization capabilities using NASA Earth observations. The team derived coastline maps by consolidating multiple images from each year to generate annual average coastline locations, which were then incorporated into risk assessment maps and an ArcGIS story map. The results delineate areas that are at-risk to shoreline loss while demonstrating that there is a more recent trend towards modest shoreline inundation and transgression. By building a greater understanding of the fluctuations of Hampton's coastline, city planners can more effectively build resilience plans and communicate with policy makers.

For more information about the Hampton Roads project, visit: https://develop.larc.nasa.gov/2018/fall/HamptonRoadsUrban.html.

Co-Developed Product

From 2014 to 2016, Vietnam experienced its worst drought in 90 years, with 52 out of the 63 provinces affected. This event and subsequent disasters emphasized the Vietnamese government's need for a reliable system that can provide forecast information about rainfall and drought. To address this challenge, SERVIR-Mekong worked with Vietnam's Ministry of Agriculture and Rural Development to develop a geospatial tool which enables more effective preparation and response to droughts. "The tool is effective for decision makers at the provincial level in their development of water resource management, irrigation operation to respond to droughts and agriculture planning." Dr. Ha Hai Duong, Chief of Department of Water Resources and Climate Change, Institute for Water and Environment at the Vietnam Academy for Water Resources.

For more information, visit: https://www.servirglobal.net/Global/Articles/Article/2676/improving-drought-resilience-and-water-resource-management-in-vietnam.