FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

FACT SHEET

# ADDRESSING CLIMATE RISK IN HAITIAN AGRICULTURE

**Feed the Future Haiti Appui à la Recherche et au Développement Agricole (AREA)**

Support to Agricultural Research and Development

## The challenge

Haiti's agricultural productivity hangs in the balance each growing season, at risk from extreme wet and dry periods and the impact of major storms such as Hurricane Matthew, which caused widespread destruction to infrastructure and crops in southern Haiti in 2016.

As weather patterns change, Haiti is ever more vulnerable in part because it is a small Caribbean island country located in the heart of a hurricane belt. With a warming planet providing more fuel for extreme weather, experts say weather conditions in Haiti will likely become more upredictable and more extreme.

Add the fact that Haiti's economy is dominated by subsistence agriculture that is heavily dependent on rainfall — with little or no access to irrigation — and the country already suffers from widespread food insecurity, and you can understand the hard reality: Haiti's food production is threatened more than ever.

*Haitian technicians and agronomists learned to assemble, program and install meteorological weather stations as part of AREA's training and support program. (AREA photo)*

AREA researchers in Haiti and at the University of Florida have partnered with Haitian agricultural institutions to develop science-based tools that can reduce climate-related risks on the farm.

## Solutions

Improved technology helps millions of farmers around the world access weather and climate information that helps them to make better decisions and improve their livelihoods — but Haiti's predominately small-scale family farmers have little or no access to this crucial information.

Researchers with AREA's Climate Smart Solutions program are working with Haitian agricultural sector professionals to develop science-based tools that will help reduce climate-related risks on the farm and increase farmers' efficiency and productivity. When incorporated in farmer advisory programs, these resources can help farmers to know how rainfall and temperatures have changed over time and are likely to vary in the upcoming season — information that can guide crucial decisions such as choosing the best crop varieties to plant, and when to sow seeds, harvest and apply fertilizer.

AREA researchers are conducting focus groups with farmers and extension agents to identify obstacles that limit the use of weather and climate information in agriculture. These include a lack of access to data and technology, and limited ability to use the information to make decisions.

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AREA is addressing these by: 1) Providing decision-support technology for assessing weather and climate-related risks, and building the knowledge and skills necessary to produce the technology in Haiti; 2) Piloting an outreach program to assess and manage climate risks on farms.

*Haitian analysts learning to analyze and interpret weather and climate data for use in agriculture. (AREA photo)*

## Progress

With investments in research, training and resources, AREA and its partners are making progress. This includes:

- **Custom-designing, assembling and installing solar-powered wireless weather stations** at partner organizations — boosting Haiti's small network of functioning meteorological stations. The stations were installed in AREA's target area in Haiti's West department, including the Bas-Boën, Kenscoff and Montrouis CRDDs, and the Association Nationale des Agriculteurs Pour l'Avancement de l'Agriculture Haïtienne (ANAPAAAH). The devices post data on the internet important to anyone planning, planting, harvesting and managing crops: temperature, rainfall, dew point and wind speed.
- **Training** more than 50 technicians to assemble, program, install and maintain the AREA weather stations.
- **Developing** an online educational tool for use by professors, researchers and extension agents to understand anomalies of rainfall and temperatures in Haiti under the influence of El Niño Southern Oscillation (ENSO). This work is in collaboration with FAMV, University Caraibe and Universite Episcopale d'Haiti. AREA is developing teaching material for use in future trainings.
- T**eaching** Haitian data analysts, including meteorologists with Haiti's Hydrometerological Unit (UHM), to use open-access software R-Instat to analyze climate data, and to create simple graphs for use in discussions with farmers and extension agents on ways to reduce risks associated with climate variability.

By closely collaborating with Haiti agricultural professionals and institutions, AREA's research team proudly continues to work with Haitian professionals to build the country's capacity to assess and manage climate risks to the agricultural sector.

## For more information

Contact Caroline Staub, Ph.D., and Bill Eisenstadt, Ph.D., co-leaders of AREA's Smart Climate Solutions program, at carogstaub@ufl.edu and wre@ece.ufl.edu.

## AREA project

In May 2015, the U.S. Agency for International Development awarded a five-year contract to a consortium of three U.S. land grant institutions led by the University of Florida's Institute of Food and Agricultural Sciences to support its Feed the Future initiative in Haiti to reduce the country's chronic food insecurity. The project — known in French as Appui à la Recherche et au Développement Agricole (AREA) and in English as Support to Agricultural Research and Development — assists Haitian agricultural researchers, professionals and institutions to modernize the country's agricultural sector. Visit the AREA's website at http://global.ifas.ufl.edu/area-project.

## Feed the Future

The project is funded by USAID as part of Feed the Future, the U.S. Government's global food and security initiative. For more information, visit www.feedthefuture.gov.