USAID
FROM THE AMERICAN PEOPLE

FACT SHEET

CLIMATE-RESILIENT FARMING

IMPROVING AGRICULTURAL DECISION MAKING IN CENTRAL AMERICA AND THE CARIBBEAN

Photo credit: USAID

USAID is helping farmers in Central America and the Caribbean improve their resilience to climate variability and change. Farmers in this region are highly vulnerable to the impacts of a changing and variable climate. Current and projected changes in temperature, precipitation, and the frequency of extreme events such as droughts and hurricanes threaten the sector's ability to meet regional goals for food security and economic growth. Furthermore, Central American and Caribbean farmers lack access to timely, user-friendly climate and weather information (referred to as "climate services") that would help them make well-informed decisions about when to plant, what to plant, how to manage pests, and what kinds of fertilizer and other inputs to use. By investing in climate services and fostering awareness about their availability and use, USAID can help farmers make crop management decisions that result in increased revenue per hectare or acre farmed.

BUILDING CLIMATE RESILIENCE

USAID's public- and private-sector partners in Central America and the Caribbean have expressed a need for increased knowledge sharing and cooperation to improve climate resilience, along with a need to make climate information more accessible and useful for farmers and other decision-makers in the agricultural sector. In response, USAID is working with partners such as Columbia University's International Research Institute for Climate and Society (IRI) to support efforts to increase dialogue between information providers (e.g., meteorological agencies and universities) and information users, so that weather and climate information is shared and applied more effectively. At the same time, USAID helps farmers learn about technologies and on-the-ground practices that can reduce climate-related risks. Some examples include:

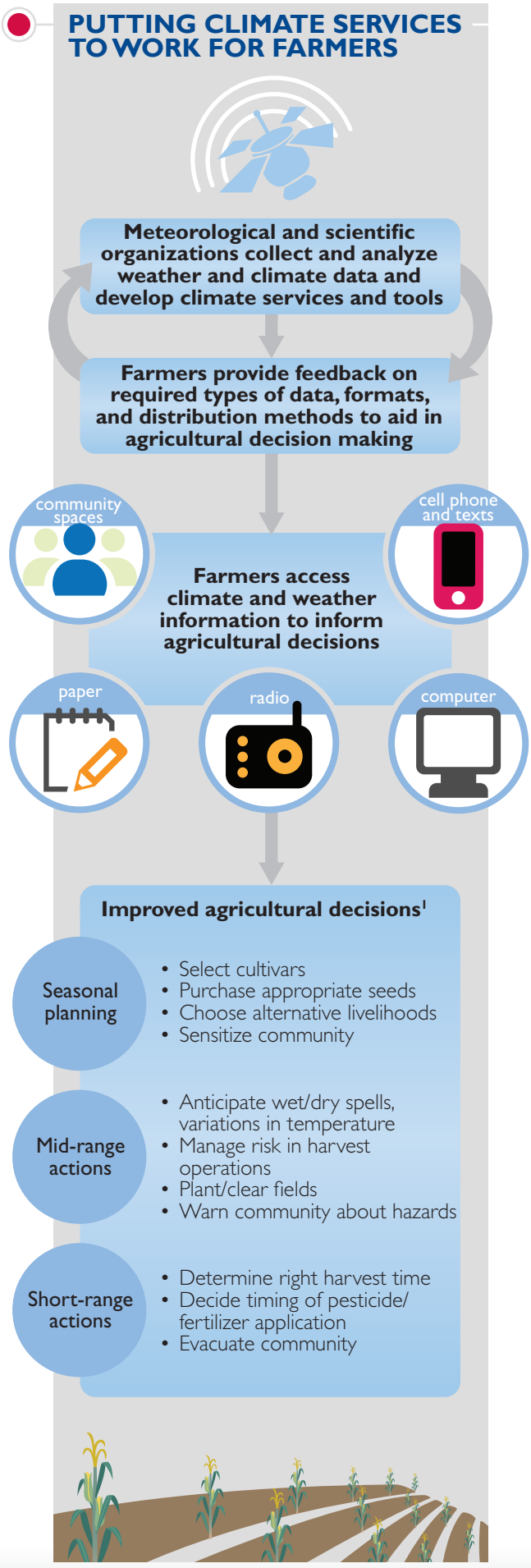
- In **Honduras**, **El Salvador**, and **Nicaragua**, the Pan-American School of Agriculture, known as Zamorano, received a grant from USAID to help farmers adapt to the increasing risk of severe droughts. Zamorano established demonstration farms, developed a university curriculum, and conducted a "train the trainers" event, enabling local farmers to educate their peers on agricultural technologies that can improve the dry-climate production of maize, beans, sorghum,

RESULTS AT A GLANCE

USAID supports agricultural resilience in Central America and the Caribbean, with the following results:

- Farmers can more easily access and understand weather and climate information and learn ways to reduce risks from drought and other climate-related events.
- Technical staff at national meteorological agencies and NGOs are better able to analyze and communicate weather and climate information.
- Climate information providers across Central America and the Caribbean have developed more collaborative relationships with users.

Photo credit: Francesco Fiondella



horticultural crops, and cattle. This effort reached 1,755 farmers and trainers, providing a total of 32,402 hours of training.

- In **Guatemala**, the Private Institute for Climate Change Research received a USAID grant to train maize and bean producers so they can determine the best sowing time, increase water use efficiency, and improve post-harvest storage systems in the context of a changing climate. This project has provided a total of 22,092 hours of training to 885 individuals in Guatemala. In addition, USAID plans to coordinate and harmonize the various public and private sources of weather data to give decision makers a more complete picture of Guatemala's past, current, and future climate.
- Through a **Central America** regional program based in San Salvador, USAID is working to create a regional clearinghouse to analyze, process, and disseminate weather, climate, and geospatial information that can support adaptation efforts. The program is improving delivery of meaningful data and analysis tools to people and institutions across Central America, and works with the private sector to create demand for this information.
- In **Jamaica**, USAID collaborated with representatives from the Meteorological Service; the Rural Agricultural Development Agency; the Ministry of Water, Land, Environment and Climate Change; and local agricultural NGOs to form a Climate Services Working Group that jointly developed an online drought forecast bulletin for farmers (see http://jamaicaclimate.net/farmers-bulletin.html). Over time, the bulletin will be expanded to include information on pests and seeds.

BUILDING CLIMATE INFORMATION TOOLS

In late 2013, representatives from Guatemala, Honduras, the Dominican Republic, and Jamaica were invited to the IRI, where they worked side by side with climate scientists to transform raw data into useful information and to develop tools to monitor and forecast the amount of water in the soil. With information about soil moisture, farmers will be able to make better decisions about planting and crop management, including which crops and seeds to use, whether to buy fertilizer, and when to plant and harvest.

Climate information tools will also help policy makers understand the impact of climate variability and change on different communities and devise appropriate response strategies. According to Erika Tenorio, associate professor at Zamorano:

> *Support from USAID and the IRI has helped us establish links between users of climate information and providers of meteorological services. Now we're working to improve our capacity to process and disseminate useful climate information. We see a lot of potential for this sort of information to improve our understanding of climate effects on production, and to help farmers cope with climate variations now and in the future.*

[1] *Source: Climate Services for Farmers > Mission Possible, Arame Tall, CGIAR Research Program on Climate Change, Agriculture and Food Security. http://goo.gl/PLPnKb*