

Climate Change: Practical Responses to a Real Challenge

By Mark Stevens and Pamela Katz

In the countries in which we work, climate change is not an abstraction.

Temperature increases, decreasing or excessive rainfall, and the resulting environmental degradation and introduction of pests are having a severe impact on developing-country agricultural productivity. Sub-Saharan Africa is particularly at risk, but the effects of climate change can be felt in Asia, the Middle East and elsewhere:

- » In Tanzania Alex Mangowi, production advisor for our USAID-funded Smallholder Horticulture Outgrower Promotion project, reports that low rainfall and high temperatures have reduced French bean yields by up to 50 percent.
- » In Kenya Guantai Stanley, marketing and communications officer of the USAID-funded Kenya Maize Development Program (KMDP), says, "In the last few years the rains have come late. Those who dry-planted this year have had to replant. Because of the intermittent rainfall, this year's crop yields will be less than optimal." Stanley says that farmers working with KMDP also have seen a temperature-driven migration of grain borers into new maize-growing regions of the country.
- » In Lebanon Hassan Istaytiyyah, country director of the USAID-funded Farmer-to-Farmer project, reports that livestock grazing areas have

decreased and thus farmers' reliance on supplementary feeds has increased.

- » In the Philippines, where climate change is leading to excessive rain, Nicholas Richards, the chief of party of ACDI/VOCA's SUCCESS Alliance project, reports that farmers are dealing with more frequent storms that affect the timing and quality of their cocoa yields.

Adapting to a Changing Environment

ACDI/VOCA's projects mitigate the effects of these conditions through environmentally sustainable production technologies that increase profitability and ensure food security. Our extensive training and education programming to enhance smallholder productivity has begun to disseminate technologies and techniques to specifically address climate change. Some programs provide training on conservation tilling to ensure soil fertility, prevent erosion and use water efficiently. Many technologies already widely used on ACDI/VOCA projects have significant applications as climate-change adaptations, such as drought-resistant seeds, environmentally friendly fertilizers, irrigation and water management, forestry management and agroforestry. In Kenya, where over 300,000 farmers have visited KMDP demonstration plots, the value

of these technologies is evidenced in the increasing farmer adoption rates of new technologies and techniques.

Building Resilience

A central approach to combating food insecurity is to reduce farmers' exposure to risk from environmental shocks by improving their access to credit, enhanced agricultural inputs, market and technical information, and weather-based insurance. In Ethiopia, for example, a weather-based information system used by the USAID-funded Pastoralist Livelihoods Initiative has proven successful in helping pastoralists anticipate and adjust to drought-induced price fluctuations.

Wherever climate change is threatening the livelihoods of rural farmers, ACDI/VOCA is responding by crafting programs that raise productivity and adapt to the harsh effects of our planet's evolving weather patterns.

Mark Stevens is a project assistant in ACDI/VOCA's Agribusiness practice area. Pamela Katz is earning an M.B.A. at the Stephen M. Ross School of Business at the University of Michigan.

