

Environment & Energy Report

INSIGHT: Climate Adaptation Must Be Part of Agriculture Programs

By Lorine Giangola and Sarah Kozyn

July 22, 2019, 5:00 AM

Agricultural development must include climate adaptation strategies to address priority climate vulnerabilities and help sustain productivity and food security, Lorine Giangola and Sarah Kozyn of Abt Associates write.

Climate adaptation. Agricultural development. These two interrelated priorities face significant shared challenges, but some countries are tackling them as separate matters.

As a result, strategies for addressing critical issues affecting both sometimes have gaps. Integrating climate adaptation goals directly into strategic, sector-level agricultural development planning can enable countries to bridge these gaps.

Collaborations with development agencies, country governments, and private sector partners are key to successful agricultural management programs that emphasize climate resilient development. This approach mainstreams adaptation into existing agriculture plans and programs, and helps ensure that planning accounts for climate impacts on the ability to meet development goals.

Integrating adaptation helps countries identify agricultural development strategies that are more likely to withstand current and projected climate impacts and builds the resilience of their agricultural systems over time.

Climate Priorities, Sustainable Production

For example, agricultural programs that incorporate adaptation into planning and implementation not only aim to meet critical development goals, such as increasing yields of staple crops, but also address priority climate vulnerabilities and help sustain productivity and food security under changing and uncertain climate conditions.

Fortunately, this integrated approach doesn't have to be significantly more expensive. Many of the technical solutions that can advance adaptation in agroecosystems are relatively low-cost and low-tech, and can be targeted to meet specific needs in any agroecosystem.

These practices include conservation tillage, no-till, and cover crops, which reduce soil loss and improve soil quality. Riparian buffers reduce soil loss and soil and nutrient runoff to surface waters. Vegetative wind breaks or agroforestry techniques reduce wind and water erosion of soils, and protect crops.

In addition to building resilience to climate and weather impacts, agricultural conservation practices are highly effective for maintaining sustainable production in cropping and grazing systems.

Building Capacity

But that's the easy part.

In addition to identifying technical solutions for a specific agricultural landscape, addressing institutional, policy, and legal limitations that inhibit the implementation of agricultural adaptation practices is critical. Even when the technical solutions are apparent, many agricultural institutions do not have the capacities or resources to provide assistance to farmers at a large scale.

Similarly, many countries do not currently have the capacity to develop or implement the policy structures that could help farmers mitigate the short- and long-term financial risk associated with adopting new practices. Strengthening institutional readiness to access diverse financing sources is necessary for implementing the solutions that contribute to sustainable production and advance adaptation in agroecosystems over large scales.

Addressing Adaptation in Agriculture

Working directly with agriculture-sector decision makers—such as government ministry staff, non-governmental development organizations, agricultural research institutions, and farmers—is the best way to identify and develop context-appropriate strategies to address these gaps.

Some countries' strategies have included improving the reach and effectiveness of agricultural extension services, or developing weather-indexed agricultural insurance schemes.

Others have created or expanded incentives for investments in climate-resilient agricultural practices and technologies, and built their institutional capacity to develop strategic financing plans and to access diverse financing sources for agricultural programs. Still others have strengthened their capacity by engaging the private sector in conservation and adaptation initiatives.

Managing agricultural systems in a warming climate and adapting to more variable climate conditions is challenging farmers and decision makers worldwide. But by mainstreaming adaptation into development planning, countries can bolster their efforts and maximize the outcomes of their sector development activities.

Expanding conservation efforts, strengthening the institutional ability to prepare for and respond to climate impacts, and taking a climate-resilient approach to agricultural management can help countries make greater progress toward achieving more sustainable and climate-resilient agroecosystems, institutions, and food systems.

This column does not necessarily reflect the opinion of The Bureau of National Affairs, Inc. or its owners.

Author Information

Abt project manager Lorine Giangola works with governments in developing countries to provide support for climate adaptation planning and implementation in agriculture and other natural resources sectors.

As co-lead of Abt's Food Security and Agriculture focus area, Sarah Kozyn develops technical strategies for new business opportunities in agriculture, economic growth, and nutrition.

© 2019 The Bureau of National Affairs, Inc. All Rights Reserved