



# INDEX INSURANCE

## BUILDING AGRICULTURAL RESILIENCE TO CLIMATE VARIABILITY AND CHANGE



Photo by: ILRI

USAID is supporting the development and evaluation of innovative insurance products that help farmers in developing countries manage climate and weather risks while taking advantage of opportunities to increase production. Pilot projects involving farmers, pastoralists, insurers, policymakers, lenders, meteorologists, and others in Ethiopia, Senegal, and the Dominican Republic are introducing, testing, and supporting the adoption of new types of agricultural insurance. These insurance products form part of a package of complementary financial and non-financial measures that together can reduce vulnerability.

### **BREAKING BARRIERS TO AGRICULTURAL INSURANCE**

With conventional agricultural insurance, payouts to farmers after a poor growing season or extreme weather event are typically based on crop or animal loss, which requires verification through on-the-ground inspection. Thus, conventional insurance is primarily accessible to larger commercial producers in developing countries; it is very costly to administer for remote smallholder farmers and rural populations. The higher costs would need to be recovered through higher insurance premiums, making conventional insurance unaffordable to many smallholder farmers. Without insurance, these farmers lack a safety net and often find it hard to convince banks to give them loans to invest in better inputs.

Index insurance can address these problems. With index insurance, payouts are triggered not by manually accounting for observed damages such as failed crops, but rather when an index—such as wind speed or an amount of rainfall over a specified time period—falls above or below a pre-determined threshold. Because payouts do not depend on demonstrating losses, administrative costs are reduced, allowing insurers to price insurance premiums at more affordable rates.

### **USAID’S ROLE IN SUPPORTING INDEX INSURANCE**

As climate change makes weather shocks such as droughts more frequent and more intense, index insurance can help smallholder farmers and herders reduce their vulnerability and protect their assets. USAID is partnering with the private sector, universities, and local organizations to pilot index insurance products that have helped hundreds of farmers and pastoralists cope with extreme weather.

### **SNAPSHOT**

- Index insurance can affordably protect small farmers against losses from climate shocks.
- Index insurance complements proactive risk management activities (such as water storage) to maximize farmers’ resilience.
- USAID adaptation programs in the Dominican Republic, Ethiopia, and Senegal are providing tailored crop and livestock insurance for hundreds of farmers and herders.



Ethiopian pastoral farmer by ILRI/Zerihun Sewunet.

**“Drought leads me to depend on handouts from the government and humanitarian organizations. But during the previous drought, I benefited from the insurance, and that motivated me to buy it again this year.”**

Guyo Jarso Guyo, pastoral farmer  
Marsabit County, Kenya

## MAKING INSURANCE AFFORDABLE

Index insurance has lower administrative costs than conventional insurance because the payout is made when an index—such as wind speed or an amount of rainfall over a specified time period—falls above or below a predetermined threshold, so insurers don't have to travel to the field to verify losses.



Some programs have developed other ways to make index insurance even more affordable to farmers. For example:

- Some providers make premiums due when farmers are more likely to have cash on hand, such as after harvest time.
- Insurance can be bundled with credit, with the insurance premium factored into the interest rate, eliminating the need for a cash outlay.
- Farmers can pay for insurance with their labor through “insurance for work” programs.



An Ethiopian pastoralist receives an index insurance policy. Photo credit: ILRI

### **The Dominican Republic: Climate resilience and risk reduction.**

USAID and local nonprofit Fundación REDDOM are teaching farmers in the Dominican Republic to reduce the impact of minor weather and water disruptions through proactive measures such as storing water in lagoons. To complement this risk reduction work, they are also coordinating with Guy Carpenter & Company, LLC,<sup>1</sup> Swiss Re, and Columbia University IRI to design index insurance products that will allow dairy farmers to recover more quickly if droughts affect their livestock. The partners will train Dominican insurers to take over management of the insurance products, and work with the USAID-funded BASIS Assets and Market Access Innovation Lab to design an evaluation to show whether index insurance and complementary risk reduction measures improve climate resilience among the participating farmers.

### **Ethiopia: Protecting pastoralists from the impacts of severe droughts.**

USAID support for the research, design, and outreach of an index insurance product in southern Ethiopia has made it possible for nomadic herders to protect themselves against the loss of livestock from severe droughts. Approximately 600 pastoralists bought policies covering 382 cattle, 15 camels, and 535 sheep or goats during the first year of the program. The International Livestock Research Institute, Oromia Insurance Company, Cornell University, and BASIS Innovation Lab use publicly available NASA satellite data on vegetation that indicate forage health and drought conditions to determine whether to pay out claims. Pastoralists typically use the payouts to buy food or new livestock to replace those lost in the drought. Migration is one coping strategy and can also affect rangeland health; about 60 cattle are being tracked via GPS-equipped collars so researchers can study how insurance affects herders' movements.

The USAID Mission in Ethiopia plans to integrate index insurance into its flagship pastoralist resilience program, which aims to increase pastoral household incomes and improve their ability to adapt to a changing climate. In 2013, USAID's Office of Science and Technology selected the Ethiopia index insurance project as a Grand Prize winner of the Science and Technology Pioneers Prize.

**Senegal: Providing index insurance to farmers.** USAID supports the R4 Rural Resilience Initiative, which helps farmers in Senegal prepare for climate shocks through improved natural resource management combined with access to index insurance and other financial tools like credit and savings. The project builds on the success of a previous index insurance pilot in Sub-Saharan Africa, which reaches 20,000 small-scale farmers and provided payouts to more than 12,000 of these farmers after a 2012 drought. The World Food Program and its partners selected the rural community of Koussanar in the Tambacounda region for a test run of a new insurance product in 2013, and plan to make the product formally available in 2014. With continued USAID support, they aim to scale up to additional locations and enroll 18,000 farmers by 2015. In addition, USAID/Senegal is supporting the development of rain-based index insurance to help the Federation of Maize Growers (FEPROMAS) become more climate-resilient and able to fulfill their contractual agreements with banks and microfinance institutions.

**For more information about index insurance, see *Insurance Innovations for Development and Adaptation: Frequently Asked Questions* – <http://goo.gl/h2LM6q>.**

<sup>1</sup> Guy Carpenter & Company is a global risk and reinsurance specialist with a microinsurance practice.