



OXFAM EVALUATION SUMMARY | FEBRUARY 2014

MANAGING RISKS TO AGRICULTURAL LIVELIHOODS

IMPACT EVALUATION OF THE HARITA PROJECT IN ETHIOPIA (2009-2012)

Farmers in developing countries are increasingly vulnerable to risks posed by weather and climate. The Horn of Africa Risk Transfer for Adaptation (HARITA) project, now known as the R4 Rural Resilience Initiative, implemented with the United Nations World Food Programme, offers integrated risk management strategies to build farmers' resilience to climate-related shocks and to improve their livelihoods. Oxfam America commissioned a study to evaluate the impact of the HARITA project in the Tigray region of Ethiopia from 2009 to 2012.

For the 1.3 billion people living on less than a dollar a day and depending on agriculture for their livelihoods, vulnerability to climate-related shocks is a constant threat to their food security and well-being. As effects of climate change increase the frequency and intensity of natural hazards, farmers face a growing risk that these weather-related shocks will destroy their assets. Understanding how to help communities confront and manage risk, so they can be resilient to climate-related shocks, is critical for addressing global poverty.

In response to these challenges, in 2008 Oxfam America, the Relief Society of Tigray (REST), Swiss Re, the International Research Institute for Climate and Society (IRI) at Columbia University, and a dozen other public and private partners—including Ethiopian farmers, local aid organizations, insurance companies, and climate

experts—developed an integrated risk management approach to enable poor farmers to strengthen their food security and improve livelihoods.

The HARITA project in the drought-prone northern state of Tigray in Ethiopia combines improved resource management and weather-index insurance. Through the project's unique insurance-for-work (IFW) model, the poorest farmers, who participate in a government-run food and cash-for-work initiative, known as the Productive Safety Net Programme (PSNP), are able to pay for insurance through their labor on the long-term risk reduction projects identified through participatory vulnerability assessments. Better-off farmers can pay for insurance in cash.

HARITA has successfully addressed some of the early concerns, such as low take up rates of insurance in early pilots and the

feasibility of making index insurance available to poor farmers.¹ Many more farmers want to buy insurance through the labor-for-insurance option than the program budget allows.

Oxfam America commissioned a study to evaluate the impact of the HARITA project in Ethiopia. Conducted by researchers at Columbia University and the University of California, Davis, together with a research consultant in Ethiopia, the evaluation was carried out during the four years of implementation of HARITA from 2009 to 2012, through a baseline survey in 2009 and follow-up surveys in 2010 and 2012.



OXFAM



In the Ethiopian hills of Tigray, farmers who don't have enough cash were able to buy weather insurance for their crops by exchanging labor for their premiums. Planting tree seedlings was one of the community projects they worked on. *Eva-Lotta Jansson / Oxfam America*

//The rain in this area is very unpredictable. This year it came very late and ended early, so we got very little from our harvest. For me, this insurance is like saving: you put in your money now and you get it back when the rain is bad and the crops don't do well.//

Gebre Michael Geday
Abraha Atsbaha village

KEY FINDINGS

IMPACT: HARITA is helping improve farmers' resilience by maintaining their livelihoods when rains fail.

- On average, across all districts² included in the evaluation, farmers insured through HARITA have increased their savings and the number of oxen—the most valuable animal and the main one used to plow the fields—relative to uninsured farmers.
- The specific ways that resilience is strengthened varied according to the specific characteristics of each district. In one district, insured farmers increased grain reserves relative to uninsured farmers; in another district, insured farmers were able to increase the number and amounts of loans they took; while in the third district, insured farmers were able to increase the numbers of oxen owned.

IMPACT: HARITA has positive, but less-widespread, effects on investments in production in good seasons.

- On average, across all evaluated districts, insured farmers have increased the amount of compost that they use per unit of land relative to uninsured farmers.
- In one of the three districts, insured farmers increased their investments in fertilizer and traditional seeds relative to uninsured farmers over the time period from 2009 to 2012; in the other two districts, farmers only increased their investment in compost, fertilizer, and improved seeds in 2010 (when rains were good), but not in 2012 (when rains were poor). Rains failed late in the season in 2012, therefore farmers had no reason to expect a drought when they were making their investment decisions.
- There is no evidence of corresponding increases in yields in either season. This lack of evidence is not surprising during the second evaluated season, in which farmers experienced a drought.

IMPACT: Female-headed households, which were among the poorest households, achieved some of the largest gains in productivity.

- Insured female-headed households, which are among the poorest households because females are more-vulnerable farmers, seem to be increasing agricultural investments more than are male-headed households participating in HARITA.
- “Sharecropping out” land is a significant obstacle to improving livelihoods, as the person who farms the land retains one-half or two-thirds of the yields.³ Sharecropping out land is more common among female-headed households than among male-headed households because female-headed households are more likely to lack oxen and the labor needed to cultivate their own land. In Kola Tembien, the study found that insured female-headed households decreased the amount of land that they sharecrop out more than other insured farmers and more than the uninsured. In Saesi Tsaedemba, the amount of land that farmers sharecrop out declined for all insurance purchasers relative to non-purchasers, not just for female-headed households. Overall, these results are encouraging and indicate a potentially important effect on women's livelihoods.
- Female-headed households increased their spending on hired labor and hired oxen more than other insured farmers and more than the uninsured across all districts, which may explain partly how they were able to start cultivating more of their own land.
- Across all districts, insured female-headed households increased the amount of land planted more than other insured farmers and more than the uninsured. They also increased the amount of improved seeds per *timad* and the total amount of compost more than all other groups.⁴

- Insured female-headed households increased the number of loans that they took and the amounts that they borrowed more than other insured farmers and more than the uninsured. The increased borrowing may have enabled them to increase their inputs.

IMPACT: Farmers and village leaders affirm the value of HARITA in helping reduce the hardships imposed by droughts.

- The demand for insurance is testimony to the farmers’ appreciation. Many more farmers want to buy insurance through the labor-for-insurance option than the program budget allows.

NO IMPACT: The consensus among farmers is that HARITA is not yet improving livelihoods in a transformative way.

- According to farmers and village leaders, longer-term improvement in livelihoods requires access to irrigation and help to diversify income sources. The long-term financial viability of the program also requires wealthier farmers to purchase crop insurance.

IMPLEMENTATION FINDING: Improve the communication and education strategy that informs farmers about the program and explains the mechanics of index insurance.

- Some farmers are not clear about what triggers the insurance payout, and some expressed confusion about which crops are being insured.
- According to key informants and farmers, lack of information about the HARITA program is preventing a larger number of better-off farmers from buying insurance.

IMPLEMENTATION FINDING: Risk reduction activities need to be managed effectively.

- Farmers greatly appreciated the risk reduction activities, however, some noted a lack of a clear process for them to offer comments and receive a response on the selection and management of these activities.
- The activities need to be scheduled earlier in the season to avoid making demands on farmers’ time when they are busy with preparing their own land and planting.

““This is the second year I joined. Both years I paid in labor since I cannot afford to pay in cash yet. This year I paid 90 percent of the premium in labor and 10 percent of it in cash. ““

Asmera Sowwa, Hadush Hiwet village

METHODOLOGY

Researchers used mixed methods—combining quantitative data from household surveys and qualitative information from focus group discussions and interviews—to understand the effects HARITA had on farmers’ production decisions and yields. The researchers observed one good season, in 2010, and one drought, in 2012, which enabled them to examine two channels through which HARITA may exert impacts: (1) by affecting agricultural investments made in a good season, and (2) by affecting farmers’ resilience after a drought.

The quantitative study utilized panel data collected in three time periods, from three rounds of surveys: a baseline survey in 2009, and two follow-up surveys, in 2010 and 2012, of 400 households in five treatment and three control

villages. This quantitative analysis uses a difference-in-difference approach to estimate impacts that can be causally attributed to HARITA.

The qualitative study included interviews and focus group discussions with HARITA participants, village leaders, and staff of organizations that implement HARITA. The interviews and focus group discussions help identify why benefits and/or disadvantages are occurring or not occurring in the program areas and why they differ across different groups and conditions, including reasons due to the implementation process. Interviews and focus groups also helped identify potential effects of HARITA that were not captured in the quantitative data, and provided the perspective of the beneficiaries.

The evaluation effort focused on the following questions:

1. How does HARITA impact the agricultural decisions that farmers make and the outcomes of those decisions on their resilience and livelihoods?
2. How do the impacts differ across different types of farmers and different conditions?
3. Why do we observe certain impacts and not others, and why do impacts differ across types of farmers and conditions?

R4 RURAL RESILIENCE INITIATIVE: BUILDING ON THE INNOVATIONS OF HARITA

Many past approaches to risk management have not been holistic in nature; instead they focused only on one or two areas of risk. HARITA has broken new ground in the field of rural risk management by developing an integrated risk management framework to enable poor farmers to strengthen their food and income security. Building on the initial success of HARITA, in December 2010 Oxfam America and the UN World Food Programme (WFP) launched the R4 Rural Resilience Initiative, known as R4. R4 is an innovative approach to helping communities better manage risk, one that involves a set of four integrated risk management strategies (R4): improved resource management (risk reduction), insurance (risk transfer), microcredit (prudent risk taking), and savings (risk reserves).

R4 focuses on mechanisms that can be integrated into social protection systems, including productive safety nets, so the results can be applied at a much larger scale by governments and international organizations, if successful. WFP formally became involved in the joint planning of R4 in Ethiopia in 2013 for program implementation in 2014 and beyond. By combining HARITA's successful model for participatory design and capacity building with WFP's global capacity and Swiss Re's innovative risk transfer solutions, R4 will



Selas Samson Biru prepares coffee in her home in Tigray, Ethiopia. She is among the farmers who have purchased weather insurance for their crops. "This insurance is very good," she says. "It's saving our assets for a bad year." *Eva-Lotta Jansson / Oxfam America*

“Our season is changing. We don't know when there will be a bad year and when there will be a good year. I believe, after taking the training, this insurance will be helpful during the bad season. This will pay me.”

Selas Samson Biru, Adi Ha village

help accelerate the scale-up and testing of this innovative approach, while expanding grassroots capacity to new communities across Ethiopia and other countries.

R4 also constitutes a first step toward developing a sustainable insurance market for poor people, an essential factor in ensuring farmers' livelihoods and food

security over the long term. This initiative will enable thousands more poor farmers and other food-insecure households to manage weather vulnerability through an affordable, comprehensive risk management program that builds long-term resilience.

NOTES

- 1 Xavier Giné and Dean Yang, "Insurance, Credit, and Technology Adoption: Field Experimental Evidence from Malawi," *Journal of Development Economics* 89, no. 1 (2009): 1–11; Shawn Cole, Xavier Giné, Jeremy Tobacman, Petia Topalova, Robert Townsend, and James Vickery, "Barriers to Household Risk Management: Evidence from India," *American Economic Journal: Applied Economics* 5, no. 1 (2013): 104–135; and Jonathan Morduch, "Microinsurance: The Next Revolution?" in *Understanding Poverty*, eds. Abhijit Vinayak Banerjee, Roland Bénabou, and Dilip Mookherjee (New York: Oxford University Press, 2006).
- 2 The word "district" here refers to the Tigrinya term *woreda*. It is equivalent to a district.
- 3 "Sharecropping out" means that the farmer owns the land but gives it to someone else to cultivate in exchange for a portion of the yields.
- 4 *Timad* is a measure of land area most commonly used in Tigray.

COVER: Gebru Kahsay, a farmer and head of a large family in Tigray, Ethiopia, was convinced early of the benefits of weather insurance for his teff, a staple grain. He was one of 200 farmers to participate in the original pilot insurance program—and he paid for his premium with cash. *Eva-Lotta Jansson / Oxfam America*



OXFAM

This report summary is based on research undertaken with financial support provided by the Rockefeller Foundation. The findings and conclusions contained in the report are those of the authors and do not necessarily reflect positions or policies of the Rockefeller Foundation.

© 2014 Oxfam America Inc. Oxfam America is a registered trademark of Oxfam America Inc., and the Oxfam logo is a registered trademark of Stichting Oxfam International.

♻️ Printed on 100 percent postconsumer recycled paper. 1402003