

## Profile: R4 Rural Resilience Initiative

*Thousands of smallholders in Ethiopia and Senegal use index-based microinsurance to manage risk and strengthen their resilience*



### Challenge

In the face of climate change, rural smallholders in many developing countries are becoming increasingly vulnerable to the risks posed by extreme weather and climatic events. The region of Tigray, in northern Ethiopia, for example, is regularly hit by severe droughts that often force smallholders to sell their assets and reduce their investments, reducing rural livelihoods and jeopardizing food security. Insuring these farmers would reduce their adoption of these deleterious coping mechanisms.



Community members participate in a mapping exercise as part of a workshop to identify R4 sites in Koussanar.

### Innovation

The R4 Rural Resilience Initiative (<https://www.wfp.org/climate-change/r4-rural-resilience-initiative>) is a strategic collaboration between the World Food Programme and Oxfam America that takes an integrated approach to risk mitigation. R4 provides four risk-management strategies to smallholders: improved resource management (risk reduction), microcredit (prudent risk-taking), savings (risk reserves), and index-based microinsurance (risk transfer). Implementation of the program is country-specific in terms of partners involved but generally involves public, private, and nongovernmental entities.

Farmers can insure both long-cycle crops (barley, wheat, maize, sorghum) and short-cycle crops (teff), up to a maximum of USD 155. Smallholders pay premiums of 13–22 percent of the sum insured, depending on the crop, with an average payment of about USD 18. For the many farmers who cannot afford the premiums, R4 offers an “insurance-for-assets” scheme, which allows smallholders to obtain insurance coverage in exchange for their labor. Participants work in community-identified risk-reducing projects, such as creating compost pits to improve soil quality. The initiative just reaches even the poorest farmers.

R4 applies participatory methods to designing its products. It developed a farmer-inclusive index using the Social Network for Index Insurance Design, which integrates both farmers' and scientists' knowledge and expertise. Scientists and local experts visit communities to inform smallholders about index insurance, learn about their risk perception, and obtain initial parameters for the design of the insurance, such as the timing of seasons and details about bad years. Indexes using satellite and rain-gauge information are developed. Additional field visits are conducted to understand farmers' preferences for different risk-management strategies and index designs through use of experimental economic research games.

## Impact

R4 has scaled up substantially since its pilot phase, in 2009. By 2015 it was reaching more than 24,000 smallholders in Ethiopia and almost 2,000 smallholders in Senegal, and pilots were being implemented in Malawi and Zambia.

An evaluation conducted in Tigray between 2009 and 2012 showed that the project largely achieved the aim of improving farmers' livelihoods (Madajewicz, Tsegay, and Norton 2013). On average, insured smallholders increased their savings by 123 percent more than the uninsured control group. They also increased the number of oxen, the most valuable asset for many farmers.

The program has had a significant impact on agricultural practices. Farmers enrolled in the initiative applied five times more compost in their fields than other farmers. In some districts investment in agricultural inputs, such as fertilizer or seeds, also rose. Female-led households, which initially had been among the poorest households, increased agricultural investment more than households headed by men. Households participating in the insurance-for-assets program reportedly improved their adaptive capacity to climate change at the village level, through water harvesting, agro-forestry, forage, and pasture production on wasteland.

## Scaling Up

Strong institutional partnerships with public, private, and nongovernmental players have facilitated the implementation and scale-up of the initiative. The different constellation of actors in each country demonstrates that R4 is capable of adapting to various institutional environments. Creating local capacity to manage index insurance will be critical to ensuring the program's long-term sustainability.

Several challenges risk limiting scale-up. One is that problems with data quality and availability mean that farmers can incur losses without the index being triggered. Solving this issue requires substantial financial investment and technological expertise. A second issue is that the number of farmers enrolled in the insurance-for-assets program has increased. Attracting better-off farmers capable of paying for insurance with cash—which would improve the financial sustainability of the program—has proven difficult.

## Reference

Madajewicz, M., H. Tsegay, and M. Norton. 2013. *Managing Risks to Agricultural Livelihoods: Impact Evaluation of the HARITA Program in Tigray, Ethiopia, 2009–2012*.

[http://www.oxfamamerica.org/static/media/files/Oxfam\\_America\\_Impact\\_Evaluation\\_of\\_HARITA\\_2009-2012\\_English.pdf](http://www.oxfamamerica.org/static/media/files/Oxfam_America_Impact_Evaluation_of_HARITA_2009-2012_English.pdf)