



MRR INNOVATION LAB PROJECT IN BRIEF

FROM CLIMATE CHANGE TO CONFLICT: MITIGATION THROUGH INSURANCE IN EAST AFRICA?

Lead Principal Investigator

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Project Partners

Cornell University, International Committee of the Red Cross (ICRC) Ethiopia, International Livestock Research Institute (ILRI), Norwegian University of Life Sciences, Oromia Insurance Company, Policy Studies Institute, University of Amsterdam, University of Nairobi, Utrecht University, Wageningen University, World Bank

Development Innovation

Insurance and conflict-mitigating interventions

Commodity

Livestock

Targeted Population

Pastoralist households

Country/Location

Southern Ethiopia and Northern Kenya

Timeline

2023-2025

Funding

\$755,532 (USAID)

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Insurance has recently been promoted as a way to reduce conflict in areas where weather-related shocks lead to resource scarcity. However, research suggests that the relationship between formal insurance and conflict is much more complex. This project, supported in part by the MRR Innovation Lab, pairs qualitative research with a randomized controlled trial to develop and test whether insurance and complementary interventions can reduce conflict within households, and within and between pastoralist communities in the drylands of Ethiopia and Kenya.

The Challenge

Several studies suggest that climate change aggravates conflict, especially in the Sahel and Horn of Africa. One often-suggested reason is that weather-related shocks, such as droughts or floods, force people to resort to coping strategies such as migration, theft or claims to common property in order to survive, which, in turn, may lead to social unrest and conflict. As a result, policymakers are increasingly promoting insurance against weather to mitigate the potential risk of conflict.

In the drylands of Ethiopia and Kenya, Index-based Livestock Insurance (IBLI) provides payouts to herders if the quality of pasture falls below a certain threshold. IBLI is one of the most successful programs of its kind, evidenced by comparatively high take-up rates and field trials that confirm positive direct impacts on productive investments and ex-post coping.¹

However, the indirect relationship between insurance and conflict is much more complex. Formal insurance may undermine informal agreements and cooperation between rival groups that mitigate the risk or severity of conflict.² Insurance might also increase conflict by encouraging intensification in the form of keeping larger herds, which puts additional pressure on shared grazing and water resources.³ If such aggravating effects of insurance on conflict exist, addressing

RESEARCH INNOVATION

Research is confirming a positive causal relationship between climate change and conflict, especially in the Sahel and Horn of Africa. The evidence, however, is contested: non-random sample selection and uncertainty about mechanisms lead to an inability to make causal statements about this relationship. One often-suggested hypothesis is that households affected by weather shocks, such as droughts or floods, lack buffers to cope and resort to strategies such as migration, theft and resource claims, which in turn could lead to social unrest and conflict.

To change this, policymakers are increasingly promoting insurance against weather shocks. While evidence shows it may provide relief against shocks, its relationship to conflict has not been investigated. Alternatively, insurance, by crowding out pre-existing informal risk-management arrangements or by increasing productivity and subsequent pressure on natural resources, to take just two examples, may increase conflict.

By using exogenous variation in formal insurance that protects pastoralists against weather shocks, combined with a conflict-mitigating intervention to address potential conflict-aggravating effects, this study will causally identify these relationships, as well as investigate if formal insurance can mitigate any aggravating effects of weather shocks.



drought-related poverty in these and other vulnerable and conflict-prone areas may require a two-pronged approach that addresses both weather shocks and conflict simultaneously.

Research Design

This research in Kenya and Ethiopia, supported in part by the MRR Innovation Lab, combines a literature review and qualitative research with a cluster-randomized controlled trial which tests the extent to which formal insurance on its own affects conflict and if its potential conflict-aggravating effects can be mitigated or its potential conflict-mitigating effects can be strengthened by combining insurance with a conflict-mitigating intervention.

The literature review and qualitative research maps linkages between climate change, weather shocks, formal insurance and cooperation and conflict. It also contributes to the design of the conflict-mitigating intervention. These interventions may include ways to ensure that IBLI complements or strengthens informal risk-sharing arrangements or that reduce any pressure caused by intensification.

The randomized experiment makes IBLI available to 3,200 households across 320 villages in Northern Kenya and Southern Ethiopia. People in these areas are particularly vulnerable to increasingly frequent droughts that have been shown to increase the likelihood of system collapse in the absence of an intervention such as insurance.⁴ These communities are randomly selected into to one of four treatment groups that randomize offering IBLI with and without a subsidy and with and without the conflict-mitigating intervention. The experiment measures impacts on conflict and cooperation within individual households, individual groups and between groups.

Rather than withhold IBLI from households who make up a control group to compare outcomes, households in a

random subsample of villages are being offered insurance at a subsidized price. This randomization introduces variation in uptake and is the basis for estimating relative impacts. Observable variation in the extent to which weather shocks impact households enables the rigorous identification of the link between weather shocks and conflict.

Development Impact

The USAID Country Development Cooperation Strategy (CDCS) for Ethiopia and Kenya list both countries as part of the USAID resilience focus, and both countries are also Feed the Future Focus Countries. This research aligns with USAID Ethiopia CDCS “Development Object 2: Resilience of vulnerable populations to key shocks increased,” as well as USAID Kenya CDCS “Development Object 3: Inclusive, market-driven, environmentally sustainable economic growth.”

IBLI is currently available in a number of areas where conflict is a continuing challenge. Expanding the reach of IBLI into new areas requires understanding its impact on conflict as well as a suite of tested and scalable interventions that successfully prevent or offset any negative interactions. If IBLI reduces or has no impact on conflict, identifying a conflict-reducing and scalable intervention that synergizes with IBLI would have large benefits for poverty reduction and resilience in the drylands.

¹ Janzen, S.A. et al. 2019. “After the drought: The impact of microinsurance on consumption smoothing and asset protection.” *American Journal of Agricultural Economics*.

² Ng’ang’a, K. S., et al. 2016. “Livestock wealth and social capital as insurance against climate risk: A case study of Samburu County in Kenya.” *Agricultural Systems*.

³ Bulte, E.H., et al. 2021. “The Welfare Effects of Index-Based Livestock Insurance Livestock Herding on Communal Lands. *Environmental and Resource Economics*.

⁴ Barrett, C.B., et al. 2014. “The impact of changing rainfall variability on resource-dependent wealth dynamics.” *Ecological Economics*.



Development Opportunity: Ethiopia

109.2 : Population in millions (2018)
27.3% : Poverty rate at \$1.90/day, 2011 PPP (2016)
86.5 : Rural population in millions (2018)
66.2% : Total employment in agriculture (2019)
21.4% : Prevalence of undernourishment (2017)
38.4% : Prevalence of stunting for children under 5 years (2015)

Source: World Bank



Development Opportunity: Kenya

51.4 : Population in millions (2018)
36.8% : Poverty rate at \$1.90/day, 2011 PPP (2016)
37.5 : Rural population in millions (2018)
57.5% : Total employment in agriculture (2019)
24.2% : Prevalence of undernourishment (2017)
26% : Prevalence of stunting for children under 5 years (2015)

Source: World Bank

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