



# FEED <sup>THE</sup> FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## **G8 Enabling Action on Risk:**

### Advancing Index Insurance by Closing the Gap between Knowledge and Implementation

*2014-2019 Report*



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# MANDATE

## Index Insurance to Manage Risk

Decades of research have documented the high costs of uninsured risks for smallholder agricultural and pastoralist households. Uninsured risk has a direct impact on a family's livelihood in specific ways. Risk keeps people poor when it leads them to pursue defensive savings strategies that cut off pathways out of poverty.

Agricultural index insurance has proven a financial tool to transfer debilitating risk out of low-income rural households. Index insurance—which predicts crop or livestock losses from an index of factors like rainfall, vegetation growth or average yields—reaches rural families in developing countries affordably by avoiding the need to verify individual losses. Index insurance has garnered significant attention internationally, though many barriers and technical challenges remain to realizing its potential and scaling it up responsibly.

From 2014 to 2019, USAID partnered with the Feed the Future Innovation Lab for Assets and Market Access and its affiliated Index Insurance Innovation Initiative (I4) to act on growing political momentum around agricultural index insurance as a tool for safeguarding rural families against uninsured risk. The \$5,000,000 award “Advancing Index Insurance by Closing the Gap between Knowledge and Implementation” built on the encouraging evidence from a series of successful index insurance interventions. The award would further develop agricultural index insurance and to expand it to a larger scale than what had so far been seen through four key activities:

1. Create a Global Action Network (GAN) of experts to advance index insurance
2. Design, implement and evaluate one or more large-scale index insurance program
3. Address index insurance pricing (and its relationship to value)
4. Identify and address knowledge gaps on index insurance

The GAN's efforts expanded the outlook for how agricultural index insurance can accelerate development in rural communities around the world. Critically, the GAN catalyzed action on neglected aspects of agricultural index insurance—particularly related to quality, contract design, approaches to bundling and consumer education.

The resources created and outreach conducted under this award were important first steps in the evolution of efforts around agricultural insurance. Research projects and pilot programs have created encouraging but isolated evidence and lessons learned. The Global Action Network helped to cohesively integrate these findings into practical resources, disseminate tools and best practices, stimulate engaging and productive discussions and peer learning, and push the future agenda toward quality implementation.

# GLOBAL ACTION NETWORK TO ADVANCE INDEX INSURANCE

## Primary GAN Activities

- Led a global community of experts to discuss key issues related to agricultural index insurance
- Identified remaining knowledge gaps on index insurance and created relevant working groups
- Built capacity among practitioners and governments in focus countries to create an enabling environment for high-quality agricultural index insurance
- Promoted responsible scaling of products among the broader insurance community by sharing tools and training

The Global Action Network (GAN) partnership leveraged the technical expertise of the Feed the Future Innovation Lab for Assets and Market Access at UC Davis and its affiliated Index Insurance Innovation Initiative (I4) and the convening power of the International Labour Organization's Impact Insurance Facility. The GAN was designed to build upon investments from USAID and global partners to close the gaps between emerging research and large-scale implementation. The primary mandates of the GAN were to:

- Convene working groups around critical issues in index insurance
- Issue resources (best practices, tools, guidance) regarding key issues in index insurance
- Organize outreach and dissemination events in emerging index insurance markets

The Global Action Network kickoff meeting on November 10, 2014 in Mexico City convened 29 leading stakeholders on agricultural index insurance representing a diverse collection of organizations including USAID, the World Bank, the International Livestock Research Institute (ILRI), Munich Re, GIZ, the Global Impact Insurance Facility, SwissRe, IFAD, UC Davis and others. This meeting laid the groundwork for the next six years of collaboration.

## Working Groups

During the initial “kick-off” Mexico City meeting, participants identified three key issues for working groups to be built around: contract design, risk pricing and market development. The ILO, as Secretariat, coordinated the working groups to:

1. Launch the technical working groups and arrive at technical working group plans and priorities, with inputs from the GAN launch meeting
2. Initiate at least one major activity per working group, which may include research, tool creation and peer exchange
3. Organize knowledge sharing activities for the entire network
4. Disseminate the work of the GAN to the broader agriculture insurance industry.

At subsequent GAN meetings in London in April 2015 and in Geneva in May 2016, the working groups in on each key issue shared their progress and drafted tools and guidelines to share with the broader insurance and donor communities. The 2016 Geneva meeting culminated in a public symposium to discuss the broader landscape of agricultural index insurance and how to make markets both sustainable and responsible.

By 2017, the GAN network had made significant progress. At a conference in Geneva that October, GAN partners shared knowledge on client and contract value, aggregation for building scale and the roles government and public organizations. It became clear that a means to assess the real value of index insurance for clients was critical, as was overcoming challenges to implementation and consumer education. These concerns led to the development of the resources described below.

## **Resources**

At the core of GAN activities was to share insights and best practices across all stakeholders and beyond on index insurance to be sure this innovative financial tool is implemented effectively and responsibly where it can have significant development impacts. To this end, the ILO's Impact Insurance Facility in partnership with the AMA Innovation Lab produced three primary resources tailored for donor organizations, policy makers and implementation partners seeking to implement or improve an index insurance program.

**Helping Farmers Understand Index Insurance: Guidelines for Consumer Education Interventions**

Index-based Insurance is an innovative resource that organizations marketing index insurance can use to ensure their smallholder farmer clients understand the products and make educated decisions on trying them. On one hand, the increasing availability of index insurance offers a big opportunity to both farmers and providers. On the other hand, the complexity of this risk management tool can lead to poorly-understood index insurance products that may do more harm than good.

The 3-D Client Value Assessment Tool allows insurance providers to measure the value of their agricultural index insurance products. This tool, which integrates the index insurance Minimum Quality Standard developed at UC Davis with the ILO's PACE insurance client value assessment tool to provide a multi-dimensional understanding of the value proposition for potential or existing clients. The tool bundles a number of resources, including the quality and value assessment tools themselves, technical work plans and guides, spreadsheets and report templates. Together, this comprehensive resource makes it possible for any organization to think through a high-quality insurance product before it reaches farmers.

**Bundling to Make Agriculture Insurance Work** is a guide for pairing agricultural index insurance with other services like credit and better farm inputs to improve how the insurance achieves better social outcomes, makes insurance more tangible and enables schemes to scale faster. Even so, bundling services is not always easy. Bundles should be designed with care to provide value to all stakeholders and should be tailored to agricultural contexts.

*“I found it extremely insightful as I gained a lot just listening to various experiences. I have a lot to take back with me.”*

- Nairobi PLP participant, July 2017

## **Outreach and Dissemination**

As the GAN and its working groups identified established key lessons and best practices and developed relevant resources, the ILO as Secretariat incorporated these products and tools designed to close the gap between knowledge and action to accelerate the adoption of better agriculture insurance practices.

The Secretariat disseminated these knowledge products in a variety of formats, sharing research findings and knowledge products with a wide audience and in relevant forums.\* The Secretariat led knowledge packaging and production, developed an agriculture section on their website, and prioritized dissemination and outreach for greater visibility of effective and quality implementation agriculture insurance.

### **GAN Webinars**

This GAN webinar series\* shared insights from the body of GAN activities and included experts from the public, private and academic sectors. Recordings of each of these webinars are freely available online. The webinar series included the following topics:

- Effectively bundling index insurance with other financial and non-financial services
- Consumer education in agricultural insurance
- The role of governments in scaling up agricultural index insurance (2 parts)
- 3D assessment of agricultural index insurance client value

### **GAN Peer Learning Platform for Policy Makers on Index Insurance**

The GAN Peer Learning Platform event series brought together a consortium of partners from the development sector to share their knowledge and technical expertise and to stimulate more government involvement to achieve greater scale and impact with agriculture insurance.

\*Details and summaries on each event are available in Appendix 1 and 2.

# PRICING AND CONTRACT VALUE: MINIMUM QUALITY STANDARDS

While index insurance has shown tremendous promise, right now households have no way to tell whether a contract will leave them worse off than having no insurance at all. There is evidence that some contracts out there have actually made people worse off – this is not an imagined/theoretical problem. Price is often expensive. Reinsurance and uncertainty often make the price very expensive, to the point where farmers may be worse off, especially if it isn't triggered when farmers need it most.

Created an innovative measure that can calculate minimum safety standards that – at a minimum – farmers won't be made worse off for having bought the insurance. We call it minimum quality standards. These standards, however, have far broader applicability than an analysis of product pricing. That, in fact, is only the beginning.

GAN supported the development of the Minimum Quality Standard (MQS) for index insurance, an innovation led from UC Davis. The MQS definition of minimum quality is that a policy's cost in premiums, whoever pays them, will offer greater financial protection for families than if they had no insurance at all.

Beyond establishing minimum quality, MQS can establish for donors or national governments whether an index insurance contract is the most cost-effective means to support farmers' wellbeing. Index insurance should have a better dollar-for-dollar potential to provide stability than an equivalent direct cash transfer.

## **Broader Applicability**

MQS has broader application beyond a discussion of the pricing of contracts alone. Once a discussion begins about product pricing, that allows for a discussion of the real value a product actually provides to clients that pay for that product.

The fundamentals of MQS are being carried forward into a broader application. UC Davis and USAID, in partnership with RCMRD in Kenya have established Quality Index Insurance Certification (QUIIC), that builds on the foundation of MQS to be the first index insurance quality certification of its kind in the world.

MQS can also be the foundation of more expansive risk management tools for small-scale farmers. Integrating MQS into other tools, such as microcredit or improved or drought-tolerant seeds, can further improve how well index insurance provides more comprehensive coverage.

# IMPACT EVALUATION: INDEX-BASED LIVESTOCK INSURANCE AND POVERTY GRADUATION

Generating knowledge about the opportunities and impacts of agricultural index insurance is at the foundation of scaling successful interventions. GAN supported advancement in research in two key areas of agricultural index insurance by leveraging ongoing research in Kenya with Index-based Livestock Insurance (IBLI). IBLI was introduced in 2009 by the International Livestock Research Institute (ILRI) and developed in partnership with UC Davis's I4, Cornell University and USAID. IBLI has proven transformative particularly in Kenya's arid regions where families make their living primarily from livestock but are vulnerable to increasingly unpredictable weather and severe drought.

GAN supported the baseline and midline surveys for a randomized controlled trial in Kenya led by UC Davis and the International Livestock Research Institute (ILRI) that tests the impact of pairing The BOMA Project's poverty graduation program for women with IBLI. The surveys included 1,875 pastoralist households in Samburu, Kenya, an arid region of high poverty rates where families make their living primarily from livestock. Beyond this single project, the surveys of these communities in northern Kenya was meant as a comprehensive source of data on the challenges of protecting vulnerable families and how index insurance contracts, even those that have not yet been invented, would protect these families.



# FILLING KNOWLEDGE GAPS

## **Index Quality vs. Index Cost: Assessing NDVI products in Kenya**

The Normalized Difference Vegetation Index (NDVI), is a measurement based on satellite data used to build many of the most effective index insurance products. GAN supported the project, “Assessing the Value of Index Insurance for Herders: Comparing NDVI-based Insurance Products in Ethiopia and Kenya,” led from Cornell University in partnership with ILRI, to compare two prominent NDVI indices: the US Geological Survey’s eMODIS and Universität für Bodenkultur Wien’s BOKU.

While both NDVI indices were highly accurate, BOKU produced indices more quickly than eMODIS process, but the BOKU data is not freely available while eMODIS data is. Higher fees could raise customer premiums even if they trigger faster payments for losses. The study also showed that contracts that explicitly provide coverage for late onset precipitation may be at least as important as choosing an index. The move to early indices, allowing indemnity payments to come early is another approach to ensuring that the timing of payouts is a beneficial as possible.

## **Innovative Revenue Insurance Index**

With index insurance, basis risk is the difference between an index insurance product’s prediction of crop losses and actual crop losses experienced by farmers. When basis risk is high, an index insurance product is less likely to pay out accurately for losses. While significant research has sought solutions to basis risk, farmers’ incomes are also at vulnerable to price volatility.

GAN supported a research team led from Catholic University and in collaboration with researchers at UC Davis to expand our understanding of how farmers understand risk while innovating a completely new type of index insurance that insures revenues rather than yields alone. This index for revenue insurance is the first of its kind and was calibrated using market price and household data from northern Ghana. The team also partnered with the Ghana Agricultural Insurance Pool (GAIP) to pilot and market these advanced index insurance products and to evaluate demand.

## **Scaling Index Insurance: West Africa Cotton Project in Burkina Faso**

Cotton is the main source of cash for many small-scale

farmers in Burkina Faso but a severe risk of drought, combined with the relatively high costs of investment required, keeps farmers from investing more into their cotton for higher incomes. Since 2009, insurance broker PlaNet Guarantee has been running its largest program in crop insurance in West Africa, starting with a feasibility study for cotton insurance in Mali with technical and institutional partners that included the Index Insurance Innovation Initiative (I4) at UC Davis. Today the program operates in Mali, Burkina Faso, Côte d'Ivoire and Senegal.

As the insurance program entered its fifth year, a GAN team of researchers consulted with PlaNet Guarantee and its partners to update its insurance contracts in Burkina Faso, to explore design elements which could generate greater inclusion in previously covered areas and to transfer the technology to private sector partners for scaling.

# APPENDICES

## Appendix I: Webinar Series

Aug 27 2015

*How Can Index Insurance be Bundled with Other Financial and Non-financial Services*

This webinar featured speakers from global organizations who shared experiences and discussed which services and activities in the agriculture value chain are most aligned for bundling. It explored mechanisms and issues in bundling, and also looked into the possible impact of bundling on pricing & off-take of index insurance and measures of tracking it.

October 29, 2015

*Customer Education in Agricultural Insurance*

This webinar featured resource persons both from implementing organizations and international development players. It looked into consumer education roles of different stakeholders in the insurance value chain, discussed issues arising for both individual farmers and their communities and showcased some interventions on to undertake consumer education.

February 25, 2016

*The Role of Governments in Scaling up Agricultural Index Insurance*

This webinar focused on how governments can catalyze agricultural insurance markets through a variety of interventions such as subsidies, market infrastructure, investments in data and customer education. It also looked at the government's role in developing enabling regulations and using insurance as a part of their social protection and agriculture development agendas.

Sep 26, 2016

*Second Webinar on the Role of Governments in Scaling up Agricultural Index Insurance*

This second webinar on governments continued to explore a variety of interventions for developing the agriculture insurance market. This webinar added government's role in developing enabling regulations and using insurance as a part of their social protection and agriculture development agendas.

March 29, 2018

*Webinar: 3D Assessment of Agricultural Index Insurance Client Value*

The 3D Client Value Assessment tool provides a multi-dimensional understanding of the value proposition for potential or existing clients. This webinar introduced the tool,

outlined its relevance and application and provided tips for practitioners and researchers on how to use it to assess the value of index insurance products.

## Appendix 2: Peer Learning Events

March 15-16, 2018 | Accra, Ghana

This workshop involved policy makers from several West African countries to share new thoughts in this area and stimulating public sector and government involvement to achieve greater scale and impact with agricultural index insurance.

July 4-5 2017 | Nairobi, Kenya

Government representatives at this event discussed how they see their role in catalyzing agriculture insurance. Participants discussed opportunities and challenges for index insurance and how governments and regulators can act as effective change agents. The countries represented included Bangladesh, Ethiopia, Ghana, Kenya, Nigeria, Pakistan, Tanzania, Uganda and Zambia. Participants included the director general of the PFEA, the director of the Tanzanian Insurance Regulation Authority (TIRA) and the director of the State Bank of Pakistan and representatives from USAID, WFP, IFAD and their local partners.

October 9-10, 2018 | Kathmandu, Nepal

At this event, representatives of implementing organizations from Bangladesh, India and Sri Lanka worked closely with Nepalese organizations to discuss factors that impact agriculture insurance and mechanisms to overcome them. Participating stakeholders included the Ministry of Agriculture and Livestock, the cooperative federation, microfinance institutions, researchers working in agriculture insurance, technical service providers, public and private sector insurers and reinsurers, brokers as well as development sector organizations.

December 11-12, 2018 | Abuja, Nigeria

The sessions in this workshop were designed around three key objectives. First was to provide resources for participants to assess when and where agricultural insurance might be most effective. Second was to discuss ongoing challenges and potential solutions to the development of a market for agricultural insurance in West Africa. Third was to discuss roles for different stake holders in improving processes and scaling operations.



# GAIN



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