



FEED^{THE}FUTURE

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

GLOBAL LEARNING AND EVIDENCE EXCHANGE MARKET SYSTEMS

MARCH 21–24, 2017 // BANGKOK, THAILAND

So You're Thinking About Index Insurance?



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INSURANCE FOR DEVELOPMENT

Uninsured risk is a major hurdle to investment, productivity growth, and poverty reduction for smallholder agriculturalists in developing countries. Traditional claims-based insurance, however, has been proven to be prohibitively costly.

Index insurance is an increasingly popular tool being used by national governments and the international development to help mitigate inherent risks faced by vulnerable agriculturalists in the developing world.

Index insurance can only help better manage risks and create pathways out of poverty, but it is vitally important that it is crafted and implemented responsibly.





COSTLY COPING FOR UNINSURED RISK

Asset Smoothing

- To protect remaining assets, households – especially the relatively poorer households – reduce consumption, most notably through meal reduction.
- This can lead to long-term negative impacts, particularly stunting of children under five.
- This, in turn, can lead to the intergenerational transfer of poverty.

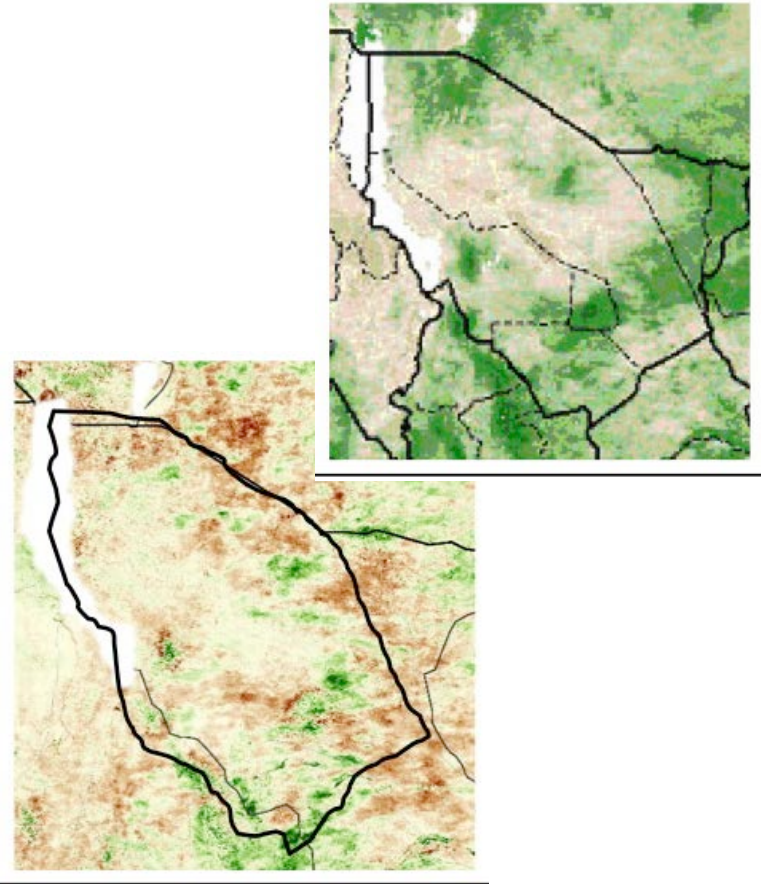
Consumption Smoothing

- Some households may sell off remaining assets to smooth consumption.
- This strategy can place households in a poverty trap when the next season arrives if the household no longer has the minimum assets necessary to maintain livelihoods.
- Through this, it can make an isolated bad year have enduring negative impacts.



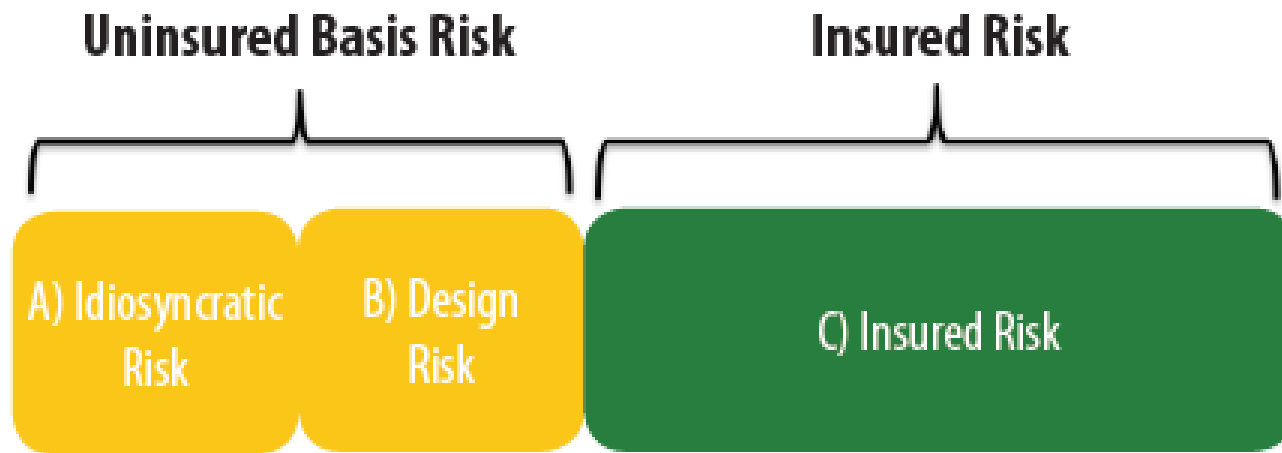
So What is Index Insurance?

- What is being insured is not the consequences of the weather events (lost yields, for example), but some external measure highly correlated with yields (the index).
- Index should be objectively and easily quantifiable, publicly verifiable, and not possibly manipulated by either the insurer or the insured.
- Payouts are based on predicted losses without individual loss verification.
- Reduces the cost of insurance and speeds up payouts.





Index Insurance Doesn't Cover All Risk



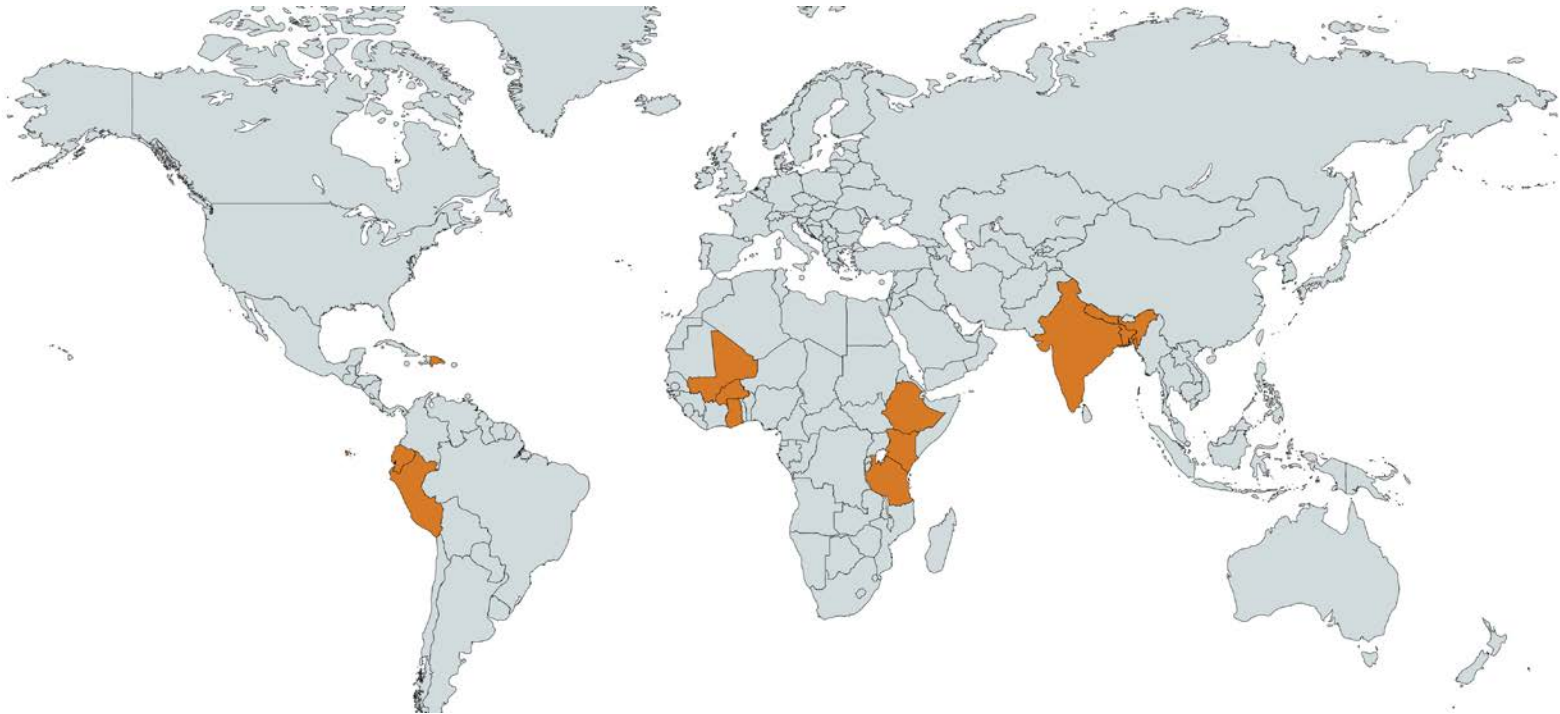
The goal is to minimize areas A & B, and to maximize area C. It's important to know both the potential – and the limitations – of index insurance.



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AMA Innovation Lab Research



Countries of Research: Bangladesh, Burkina Faso, Dominican Republic, Ecuador, Ethiopia, India, Kenya, Mali, Mozambique, Nepal, Peru, Tanzania



AFTER THE DROUGHT

- Index-Based Livestock Insurance (IBLI) in Northern Kenya paid out after the 2011 drought.
- On average, insurance led to a 36 percent reduction in sales of remaining livestock, and a 25 percent decrease in meal reduction compared to uninsured households.
- For relatively richer households, who tend to sell assets and smooth consumption, insurance led to a 70 percent drop in asset sales. For relatively poorer households who tend to reduce meals to cope, insurance led to a 62 percent reduction in this costly strategy.



AFTER THE DROUGHT (cont)

- An evaluation of the impacts of the pilot of Index-Based Livestock Insurance (IBLI) in Mongolia indicated that insured households treated by the insurance intervention recovered better than untreated households.
- Per a study of the impacts of payouts after a 2009/2010 shock, two years after the shock insured households owned between 22 and 27 percent more livestock, a key indicator of welfare in this area. These positive effects persisted, if less pronounced, three and four years after the disaster.



BEFORE THE DROUGHT

- Impacts before drought strikes might have the most direct relevance to market strengthening.
- Insured cotton farmers in Mali increased the area of cotton cultivated by 55 percent, increased their use of loans for productive investments by 34 percent, and increased their use of productive inputs by more than 50 percent.
- For cotton farmers in Burkina Faso, being insured allowed them to invest more in other high-value crops compared to their uninsured peers (in this case, sesame).





So You're Thinking About Index Insurance?

Components of a Successful Index Insurance Venture

1. Why to consider index insurance for agriculture
2. How to assess if index insurance is a good fit
3. The importance of identifying a feasible high-quality index
4. New innovations in contract design that increase value to farmers
5. What institutional structures have to be assessed
6. The challenges & opportunities for marketing and distribution
7. Ongoing challenges facing the successful scaling of index insurance



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Mongolia: Index-based livestock insurance program



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Content

Context at appraisal

Intervention and design

Implementation and results

Challenges and opportunities

Summary of key points

Additional resources



Context at appraisal

- Mongolia – vast country (about 3 times bigger than Thailand)
- Insurance sector – underdeveloped (shifted to Market economy in 1990)
- Agriculture/Livestock sector – important and historic loss data available
- Climate risks - high





Intervention and design

Intervention rationale

- Market failure for disaster insurance
- Insurance as a part of agriculture risk management
- Constitutional clause for state protection of livestock – national wealth
- Government support and back-up needed



Intervention and design

Intervention: IBLI project

Component 1: *Pilot Index-Based Livestock Insurance Programs*

Component 2: *Promotion and Public Awareness*

Component 3: *Institutional Capacity Building*

Component 4: *Monitoring and Evaluation (M&E)*

Component 5: *Project Management*

Managed insurance processes with periodic reviews from the World Bank

Outsourced: Feasibility studies, data cleaning, ratemaking and actuarial reviews, contract reviews, climate studies, face-to-face trainings, public awareness, MIS, monitoring surveys, impact assessment, and capacity building for AgRe JSC



Intervention and design

Design

- Innovative insurance product

- Risk layering →

Upper layer Public coverage

- Government used WB contingent credit for this during Project
- Now Government pays for the reinsurance fee for this layer
- First reinsurance agreement was entered on this layer in 2012

- Risk pooling

- Risk financing

Middle layer Commercial coverage

- Herder pays the premium for the middle layer only (between Threshold 1 and Threshold 2)
- This layer has been internationally reinsured since 2010.
- Now AgRe JSC retains the residuals risk on this layer.

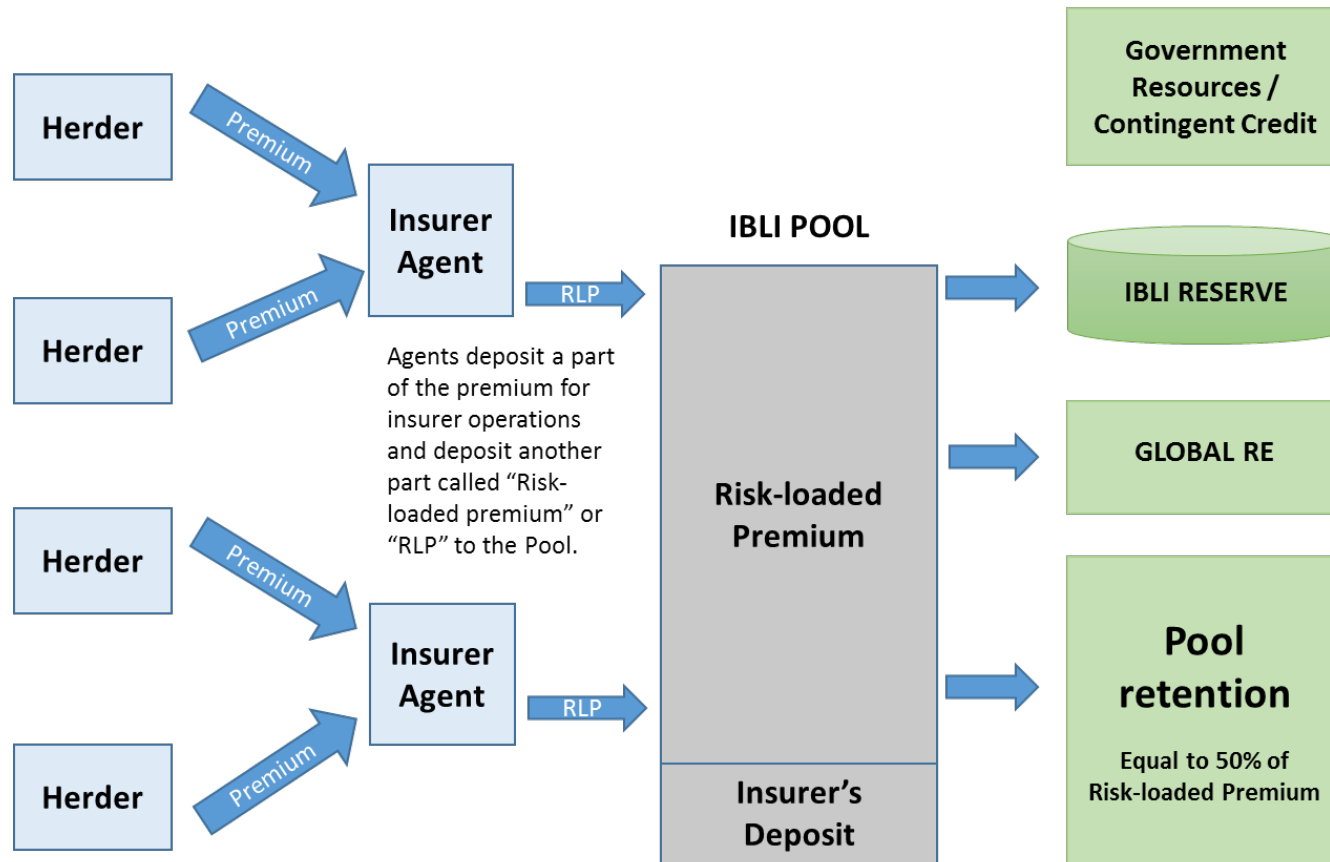
Lower layer Self coverage

- Herders are responsible when area mortality index is below Threshold 1



Intervention and design

Design: Risk Transfer

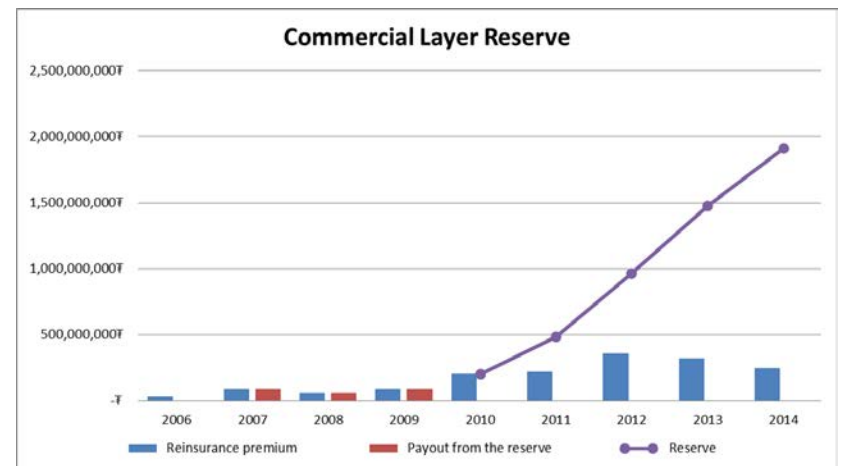
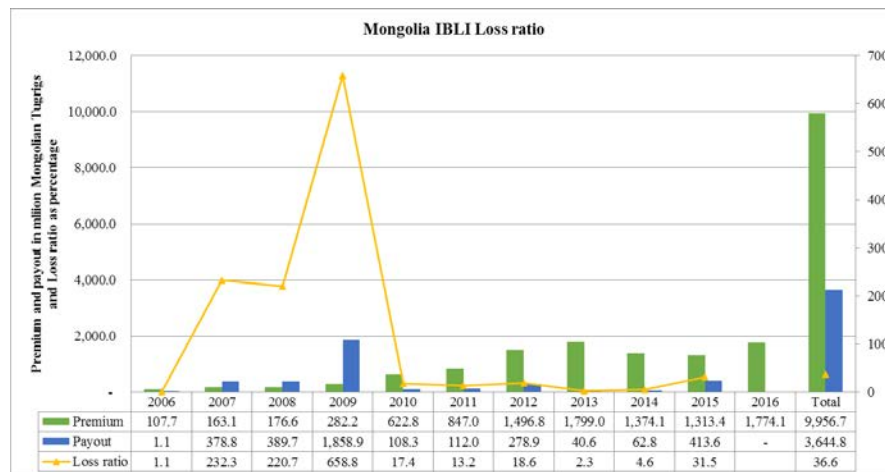
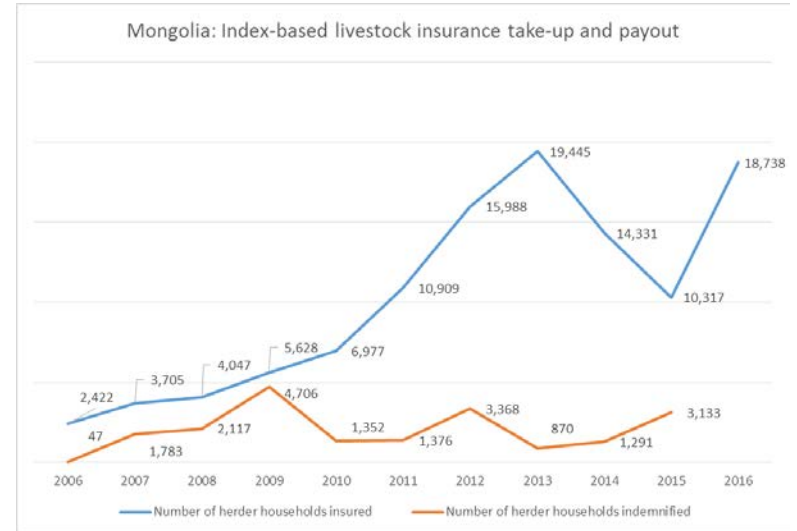
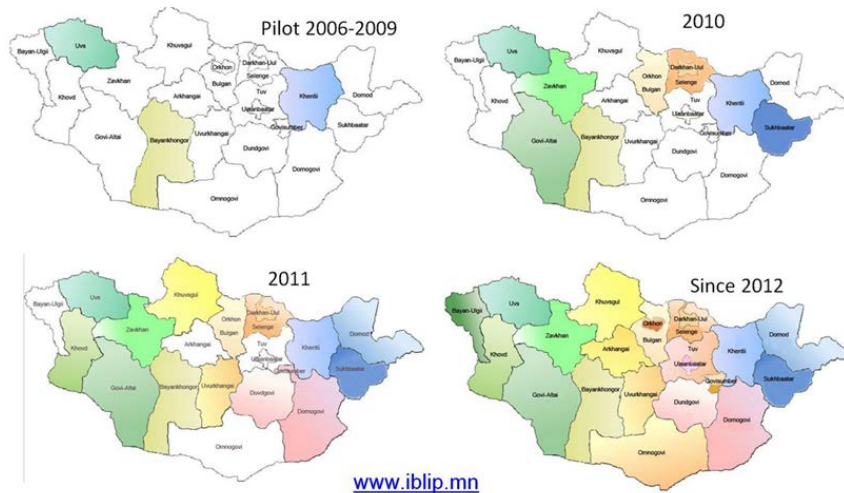




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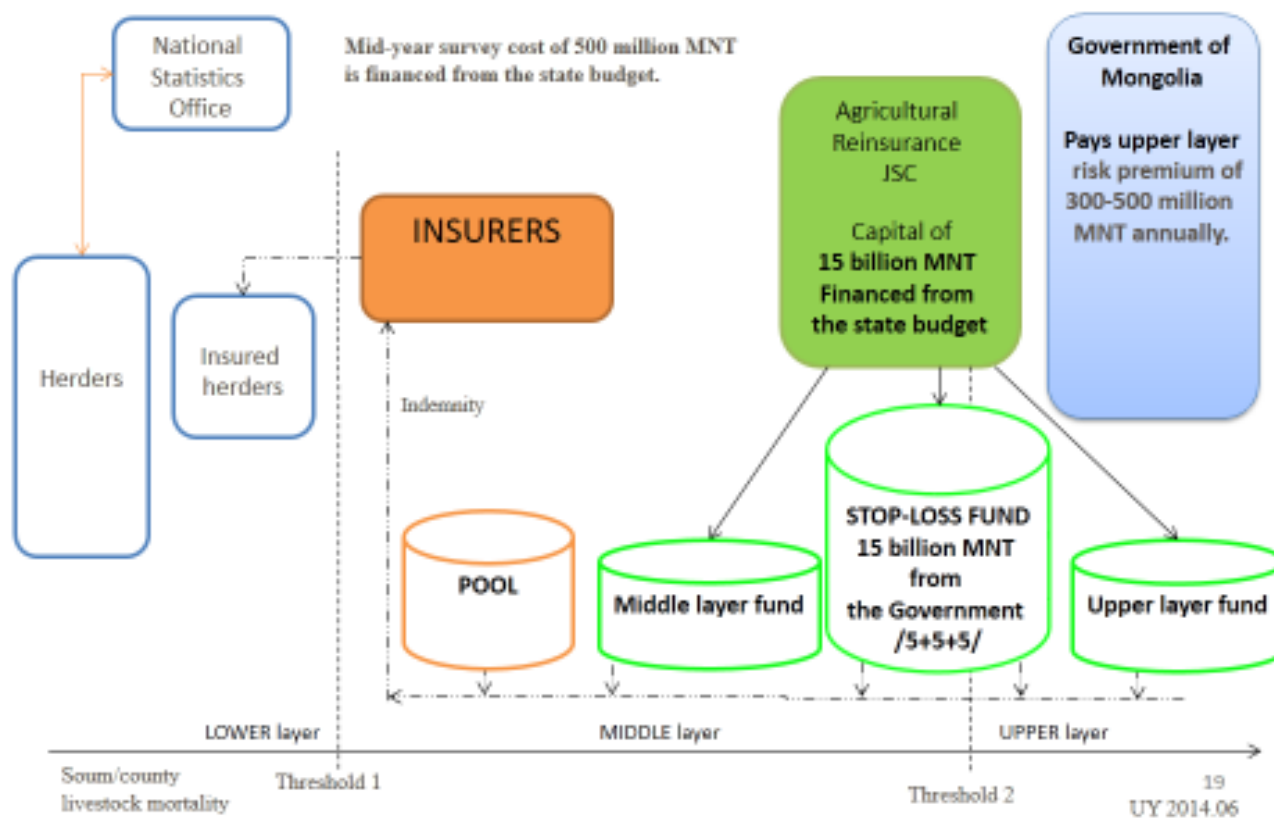
Implementation and Results





Implementation and Results

IBLI framework Mongolia





Challenges and opportunities

- Take-up challenges
- Affordability issues for higher coverage
- Challenges to meet Social protection needs

Growth strategies

- Market penetration
- Market expansion
- Product expansion and other



Growth strategies to consider

Market penetration

Upper layer Public coverage

- Government pays for the reinsurance fee for this layer
- Introduce sub-layer supported by local government, organizations, and individuals

Middle layer Commercial coverage

- Herder pays the premium for the **SMALLER** middle layer only.
- The premium decrease would cause increase in penetration and insured value.
- AgRe JSC retains the residuals risk on this layer.

Lower layer Self coverage

- Herders are responsible when area mortality index is below Threshold 1



Growth strategies to consider

Market expansion

Upper layer Public coverage

- Government pays for the reinsurance fee for this layer

Middle layer Commercial coverage

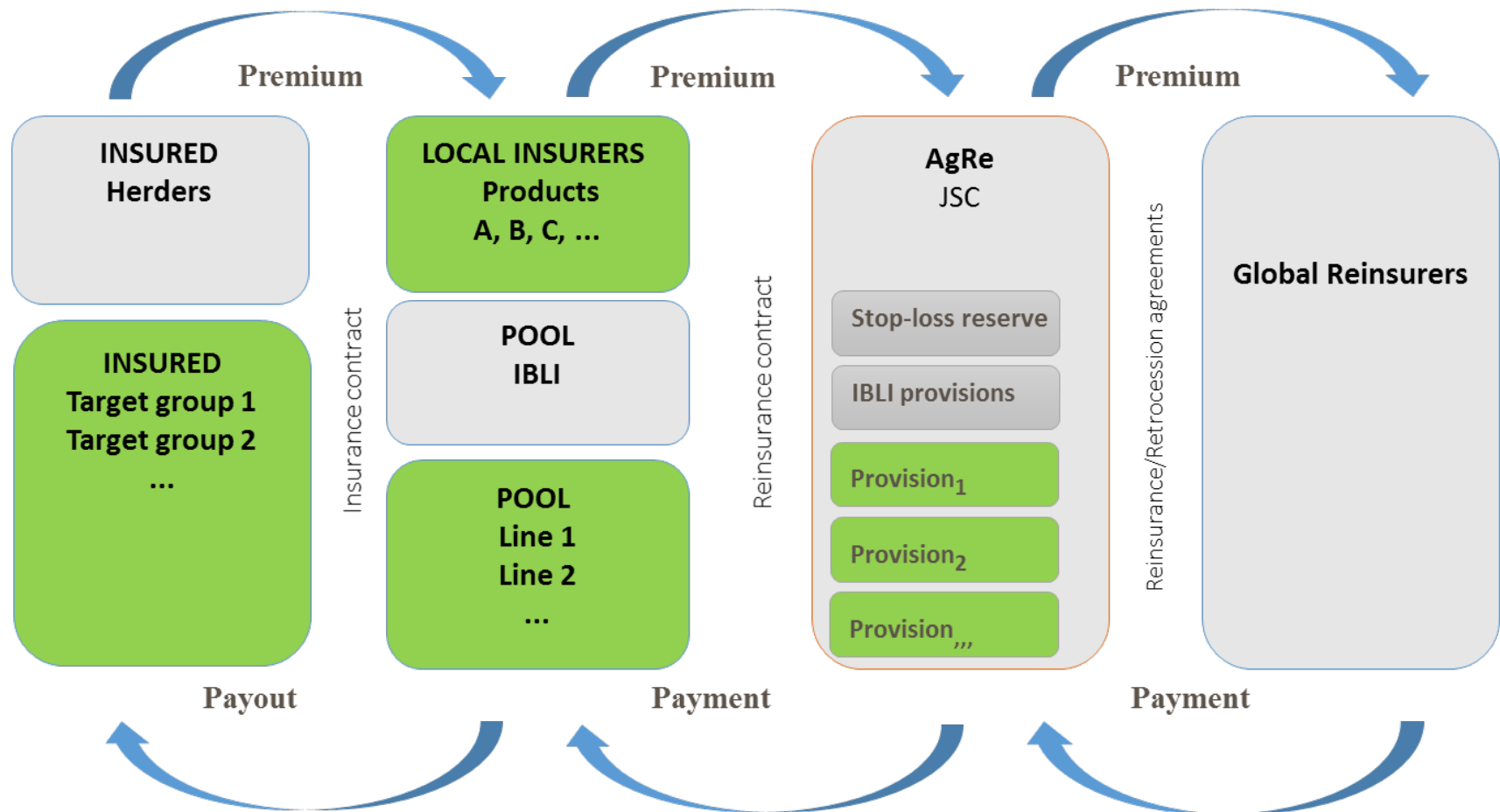
- Soum/county government pays the premium for the middle layer only.

Lower layer Self coverage

- Insured is responsible when area mortality index is below Threshold 1



Growth strategies to consider





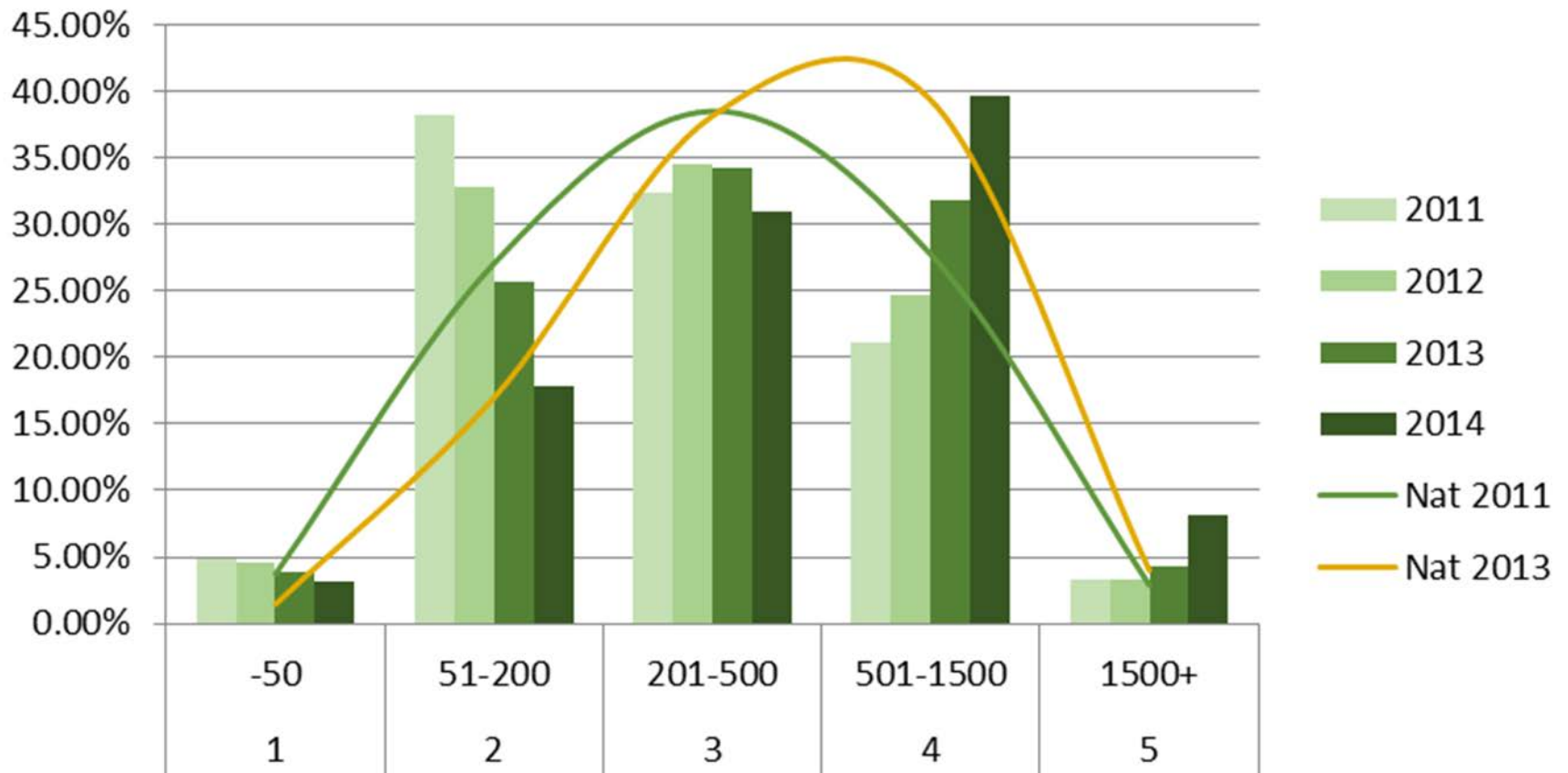
SUMMARY OF KEY POINTS

- Insurance needs to be part of a broader risk management strategy, which can promote a virtuous cycle of good behavior.
- Keeping a strong engagement from both public and private sector is a key.
- A carefully planned monitoring and evaluation strategy can enhance a project, and increase impact.
- A strong enabling environment is a prerequisite for the success of an innovation such as index insurance.
- Awareness building takes time and resources.
- Data is fundamental for insurance programs.



Annex 1

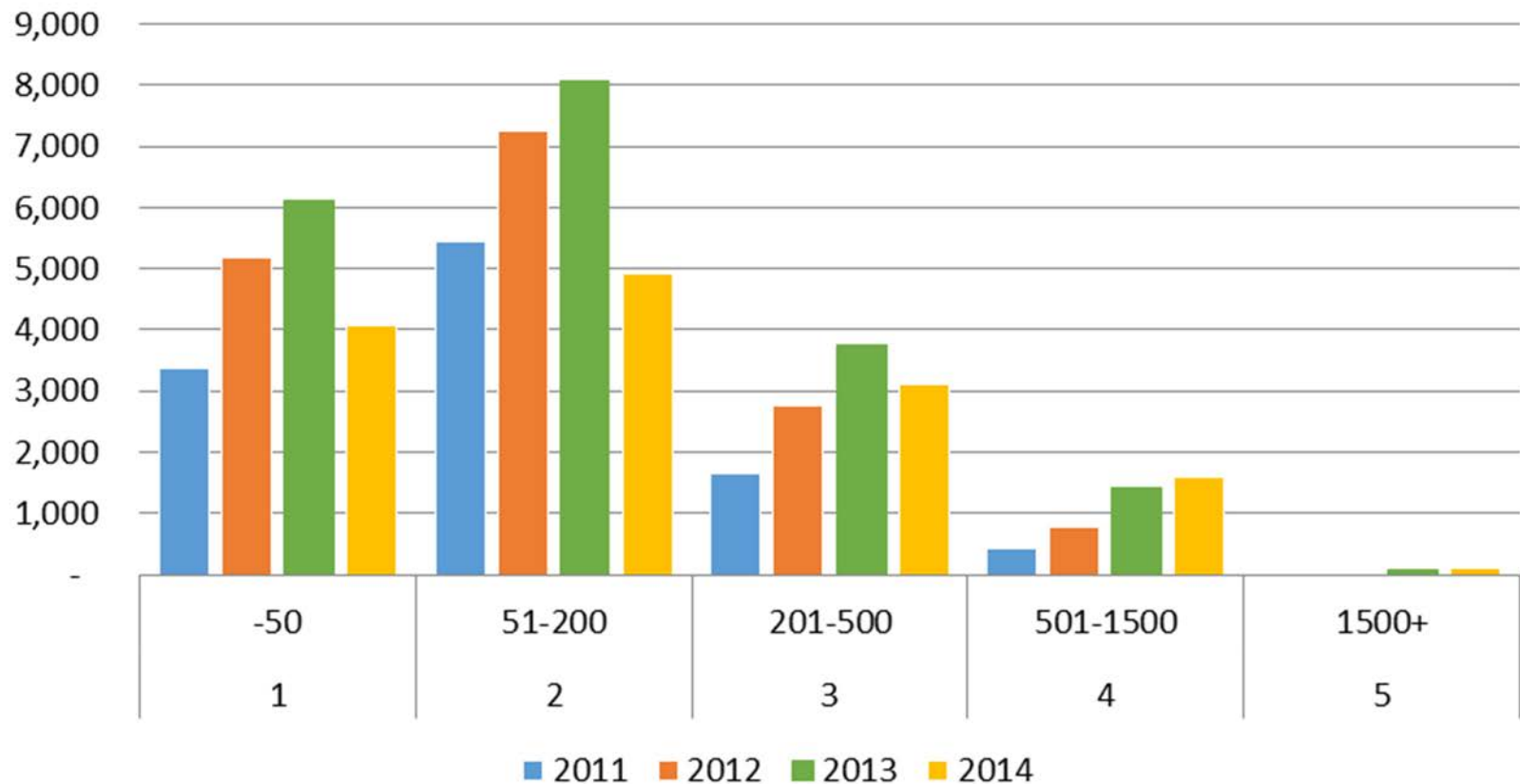
Insured livestock percentage by strata





Annex 2

Insured herder households by Strata





CHALLENGES REMAIN

Market & Demand

Insurance interventions are often met with lower than anticipated demand. This could be due to a number of different challenges, including distribution models, client trust (or distrust) of financial institutions, and client outreach and education.

Quality & Client Value

Selling insurance is not enough alone. The product should be quality, such that it effectively protects farmers from the risks they face, and pay out fairly for the money farmers invest into the insurance through premiums. More needs to be done to establish and enforce safe minimum standards.

Leveraging the Opportunity

Too often program design is segmented – insurance is either thought of as social protection (after the drought) or as a tool for growth (before the drought); these are not fixed. More needs to be done to develop comprehensive designs that allow poorer households to insure marginal risks that they might then be able to take on later.



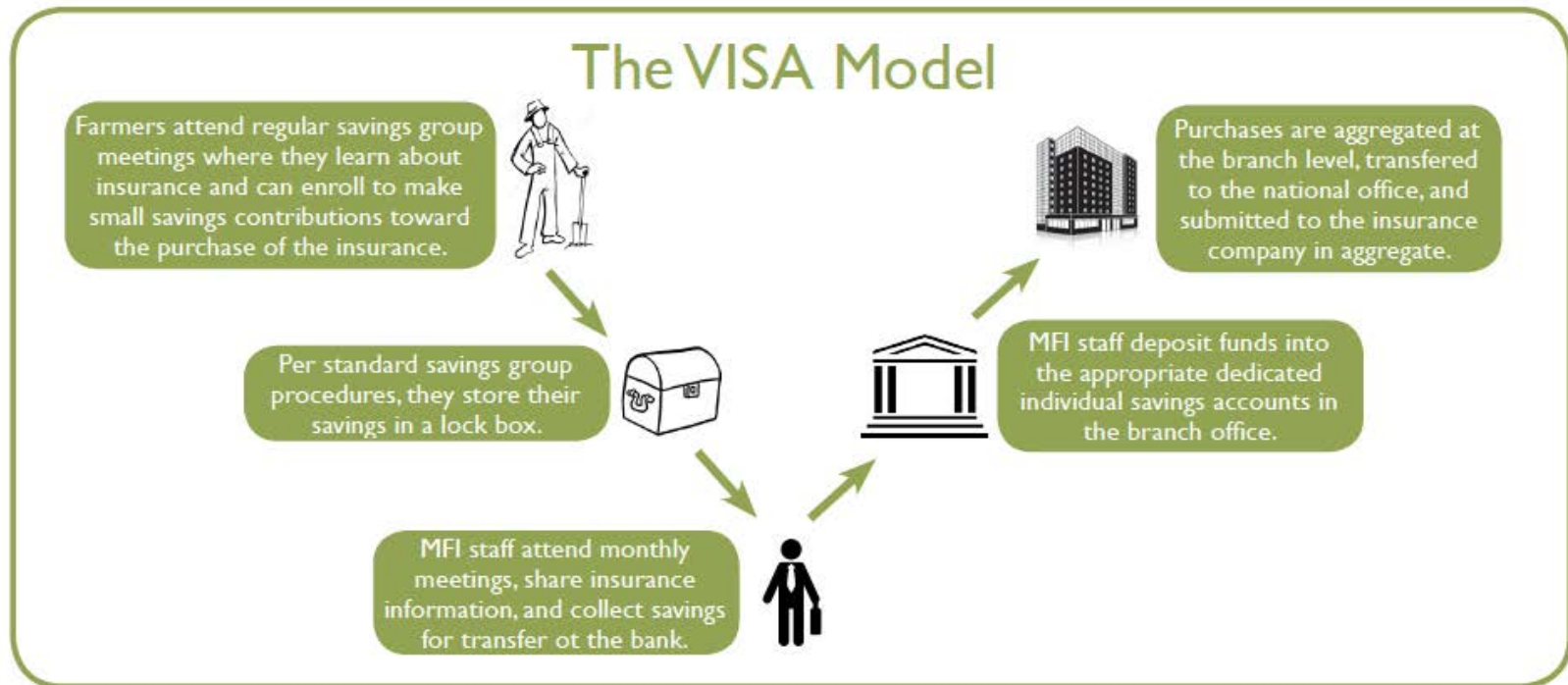
THE “VISA” MODEL

Village Insurance-Savings Accounts

- Designed to overcome the challenge of bringing agricultural insurance to remote, rural communities
- Idea emerged while conducting a feasibility study for agricultural index insurance in Nepal
- Building off the established model of microfinance bringing small-scale savings and credit to remote customers
- If microfinance could bring small-scale farmers financial services like savings and credit, why couldn't they do the same for insurance?



HOW VISA COULD WORK IN THE FIELD





OVERCOMING KEY CHALLENGES

Challenges

- Insurance companies are not interested in small sales
- Farmers are not familiar with insurance & how it works
- Farmers may not know or trust insurance companies
- Farmers may not have the premium ready at the right time

VISA Solution

- VISA groups aggregate small purchases into one larger purchase
- MFI can work with existing groups to educate about insurance
- Farmers are already highly engaged with the MFI
- Can save early to have premium ready at time of purchase



OTHER FUTURE DIRECTIONS

- Linking insurance to other complementary high-value interventions (credit, savings, social safety nets, improved technologies)
- Smart(er) subsidies
- Creating risk management portfolios that can evolve over time
- Safe Minimum Standards (SMS) for index insurance





BUNDLING INSURANCE

- Interlinked credit and insurance may enable farmers to make investments and increase the credit supply.
- Bundling with inputs or other high-value interventions may increase uptake.
- Bundling with shock-tolerant seeds may reduce the cost of insurance and better cover the risk portfolio.





SMART(ER) SUBSIDIES

- Subsidies could be applied to provide coverage for the most catastrophic events
- Farmers have the option to top-up insurance to cover less catastrophic risk layers
- Will lower overall cost of insurance for farmers and create a minimum market size for insurance companies
- May also increase farmer trust in insurance b/c government is putting their money there
- Or, perhaps, “learning” subsidies may be effective





RISK MANAGEMENT PORTFOLIO

- Different tools may be required for different points in time for different subgroups of farmers.
- Managing risk through savings requires accumulation of wealth; similarly, access to credit may require accumulation of assets.
- Alternative mechanisms are being tested to diversify the tools available, such as emergency loans through BRAC in Bangladesh (contingent emergency credit that mimics index insurance and is released in the event of a shock for pre-approved clients).



Emergency Loans in Bangladesh

The Core Characteristics of the Emergency Loan

ELIGIBILITY

Only clients with good past repayment behavior will have access to the Emergency Loan. Each client will be assigned a credit score (ranging from 1 to 100) with approximately the top 50% of borrowers deemed eligible for the Emergency Loan. This reduces the risk to BRAC in case the repayment rates on these loans are lower than on the usual portfolio.

PRE-APPROVAL

Eligible clients are told they will have guaranteed access to credit up to 50% of their last conventional loan. Pre-approval is intended to give clients a sense of security, allowing them to increase investment in risky but high-return activities.

TRIGGER

The Emergency Loan is made available to clients when the trigger - a nearby water gauge maintained by the Flood Forecasting and Warning Center (Bangladeshi government) - shows the river height passing a pre-defined danger level.



SAFE MINIMUM STANDARDS

- At a minimum, we should make sure we are not making difficult situations worse.
- To assess safe minimum standards you need to know how often and how much a contract pays out.
- If paying for a particular product would, on average, negatively impact farmers, that product should not have been brought to market.





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TECHNOLOGICAL INNOVATIONS

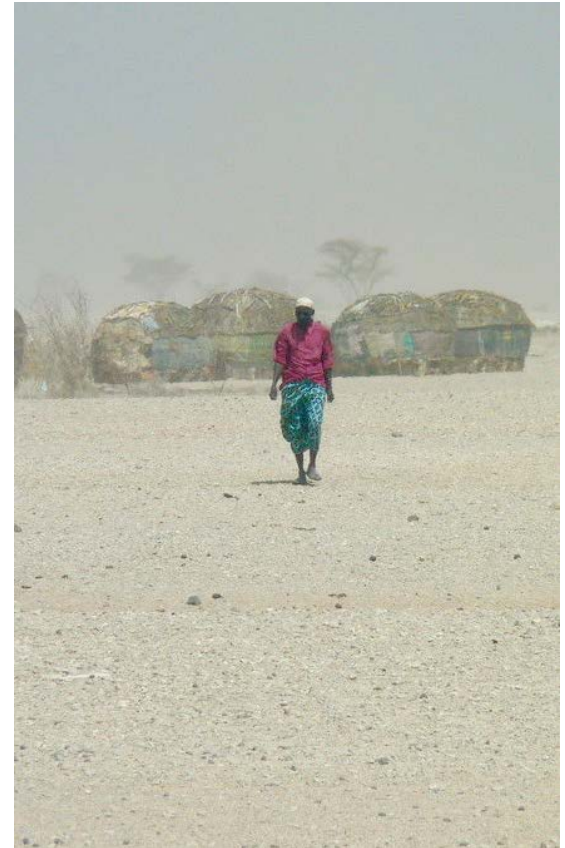
- Index Design
- Crop Masking
- Education
- Marketing
- Distribution
- Payouts





SUMMARY OF KEY POINTS

- Index insurance can enable smallholder agriculturalists to invest more into growth opportunities, and to avoid costly coping strategies if a shock occurs.
- Potential impacts of index insurance are maximized when linked to other interventions and opportunities.
- More needs to be done to ensure that the contracts brought to market are high-value and will actually protect farmers as intended.





ADDITIONAL RESOURCES

- World Bank ICR
<http://documents.worldbank.org/curated/en/320451476970893810/pdf/ICR-Main-Document-P088816-2016-10-13-10172016.pdf>
- Mahul O. and Stutley C. "Government support to agricultural insurance"
<http://documents.worldbank.org/curated/en/698091468163160913/pdf/538810PUB0Gove101Official0Use0Only1.pdf>
- Cummins J. and Mahul O. "Catastrophe risk financing in developing countries"
<http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/CATRISKbook.pdf>
- GFDRR "Financial protection against natural catastrophes"
<https://www.gfdrr.org/sites/default/files/documents/Financial%20Protection.pdf>
- AgRe JSC Mongolia <http://www.agreinsurance.mn>



ADDITIONAL RESOURCES (cont)

- basis.ucdavis.edu
- <https://ibli.ilri.org>
- <http://www.impactinsurance.org/partner/gan>



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Index-based livestock insurance project

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B A S I S



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