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

CLIENT VALUE & INDEX INSURANCE

TARA STEINMETZ, ASSISTANT DIRECTOR
FEED THE FUTURE INNOVATION LAB FOR ASSETS & MARKET ACCESS

Fairview Hotel, Nairobi, Kenya
4 JULY 2017

basis.ucdavis.edu

USAID
FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

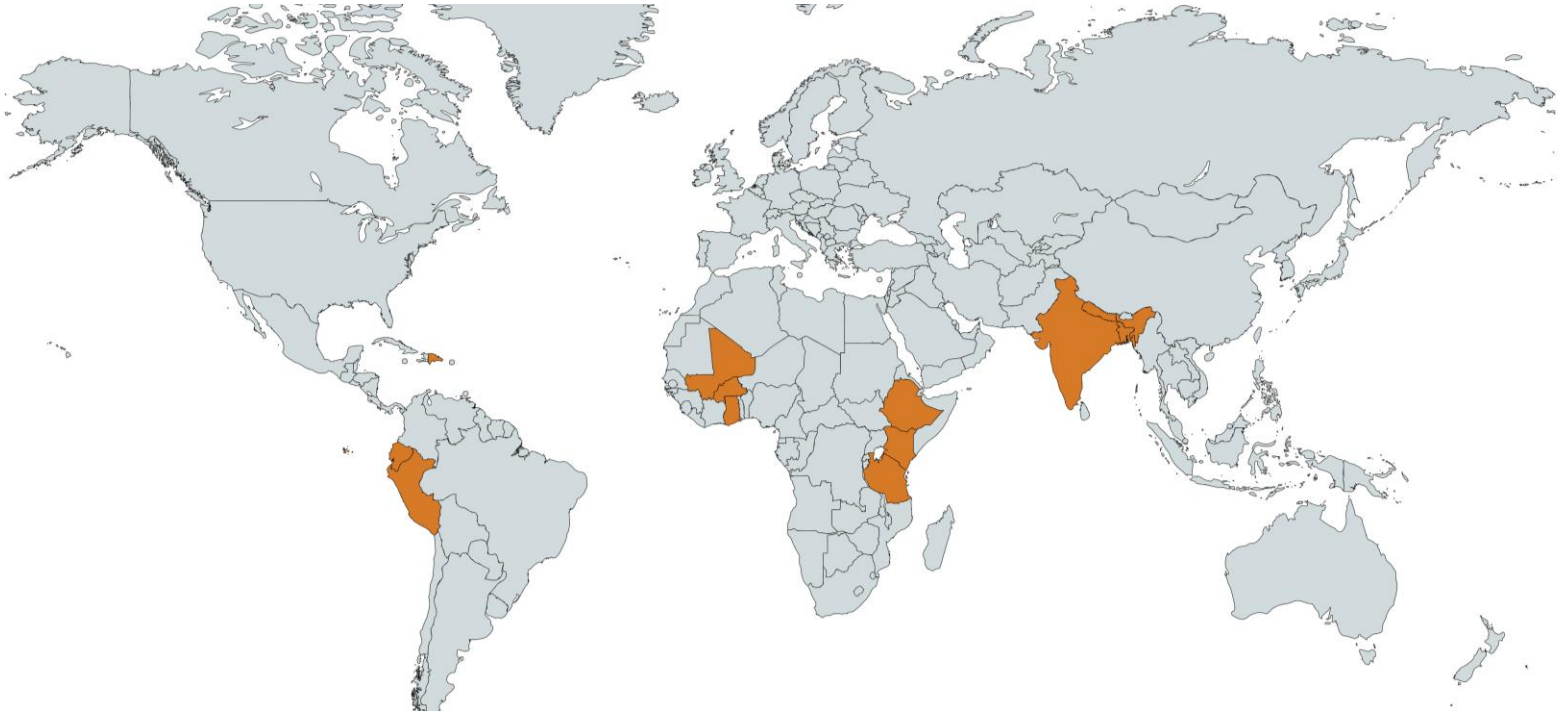
UCDAVIS
UNIVERSITY OF CALIFORNIA

PRESENTATION OVERVIEW

1. The potential for development
2. A cautionary tale on quality
3. Prioritizing client value
4. How to assess context
5. Tools to assess product value
6. Case studies
7. Key policy takeaways
8. Group exercise

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

AMA Innovation Lab Research on Insurance



USAID
FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR
ASSETS & MARKET ACCESS
BASIS

UCDAVIS
UNIVERSITY OF CALIFORNIA

WHAT IS THE GOAL?

- **To protect current consumption and assets despite shocks**

- This is done by stabilizing production income at a certain level (say, 75% of average)

- Because of this goal, there are some key underlying assumptions:
  - A. Insures a large share of the income (main crop)
  - B. Covers shocks that matter (main risks – or all shocks)
  - C. Pays when losses occur

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

COSTLY COPING FOR UNINSURED RISK

Reducing Consumption

- To protect remaining assets, households – especially the relatively poorer households – reduce consumption..
- 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.

Selling Assets

- Some households may sell off remaining assets to smooth consumption.
- Can place households in a poverty trap if the household no longer has the minimum assets necessary to maintain livelihoods.
- Can make the negative impacts of a shock last years.

Relatively poor insured households reduced use of this strategy 62%.

Relatively better-off insured households reduced distressed asset sales 70%.

USAID FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UCDAVIS UNIVERSITY OF CALIFORNIA

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

INSURANCE ENABLES INVESTMENT

In an impact evaluation of an index-based insurance intervention in Mali, cotton farmers:

- Increased area cultivated **55%**
- Increased use of loans for investment **34%**
- Increased use of productive investments **50%**

In Ghana, index an interlinked credit and insurance intervention:

- Women increased their loan applications **15-17%** for traditional interlinked products
- Banks increased loan approval by **32%** when payouts went first to paying the balance of the loan
- **54-60%** of farmers are willing to pay above market prices for insured loans

USAID FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UC DAVIS
UNIVERSITY OF CALIFORNIA

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

What Could Happen with Low Quality Insurance?

HARM TO FARMERS

If farmers experience an insurable, catastrophic loss and the contract fails, they could be left **worse off** than if there had been no intervention at all.

"The season was bad. We could not pay back our credit. We were forced to sell our goats and sheep to pay off our debt and the insurance."

"The farmer who has had a bad harvest and does not get insurance payouts still has to pay the insurance fees. This is a double penalty for him."

USAID FROM THE AMERICAN PEOPLE

BASIS INNOVATION LAB FOR ASSETS & MARKET ACCESS

UC DAVIS UNIVERSITY OF CALIFORNIA

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

What Could Happen with Low Quality Insurance?

"But after the shock last year when we did not receive anything, it really discouraged us."

"Their [the sales agents] attitude shows that they just want to make profit on us.

It is not to help us."

LONG TERM

This kind of loss of trust in insurance as a tool **could ruin the insurance market** for future high-quality products with high potential for development impact.

USAID FROM THE AMERICAN PEOPLE

BASIS INNOVATION LAB FOR ASSETS & MARKET ACCESS

UC DAVIS UNIVERSITY OF CALIFORNIA

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

WHAT ARE THE POLICY IMPLICATIONS?

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

FARMER VALUE FROM INDEX INSURANCE

- From the farmer's perspective, are they at least not **WORSE** off for having bought insurance?
- Has to be the **right tool** for the **right challenges** in the **right context** (not designed to work for every commodity in every country).

USAID
FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UC DAVIS
UNIVERSITY OF CALIFORNIA

HOW DO I ASSESS CONTEXT?

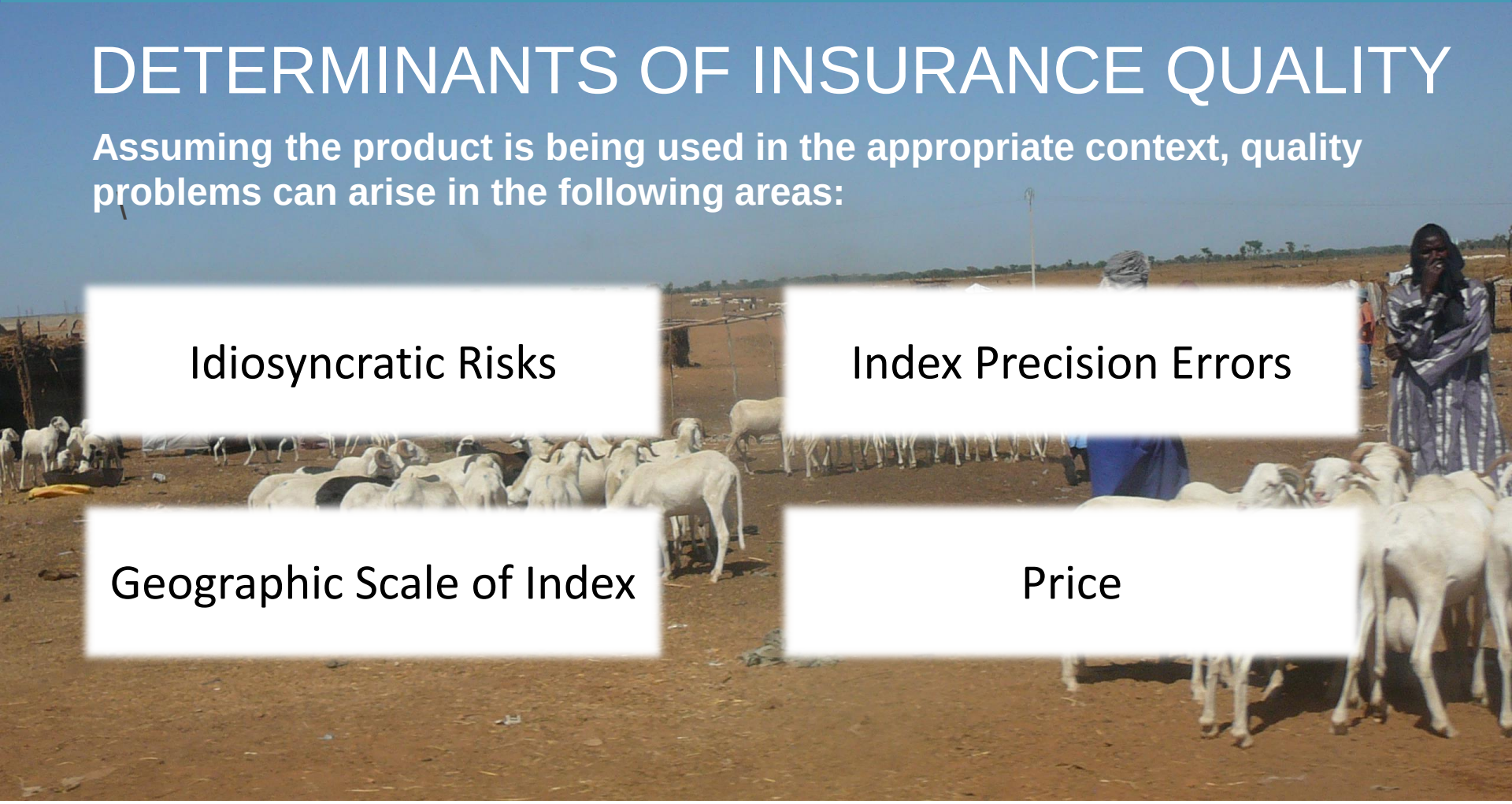
1. Identify whether risk is a barrier to growth and/or a contributor to poverty, and identify resources available for any intervention.
2. Assess whether an index-based insurance product can be designed to effectively transfer risk for smallholder farmers.
3. Move from the design phase to the field to assess how and inbox-based insurance product might be delivered in the field.

If all of the steps above indicate a high potential for a high-quality, responsibly implemented index-based agricultural insurance product with appropriate support, then this may be an appropriate tool for development impact. Under these circumstances, its worth taking the next steps to contract and implementation design.

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

DETERMINANTS OF INSURANCE QUALITY

Assuming the product is being used in the appropriate context, quality problems can arise in the following areas:



- Idiosyncratic Risks
- Index Precision Errors
- Geographic Scale of Index
- Price

USAID FROM THE AMERICAN PEOPLE

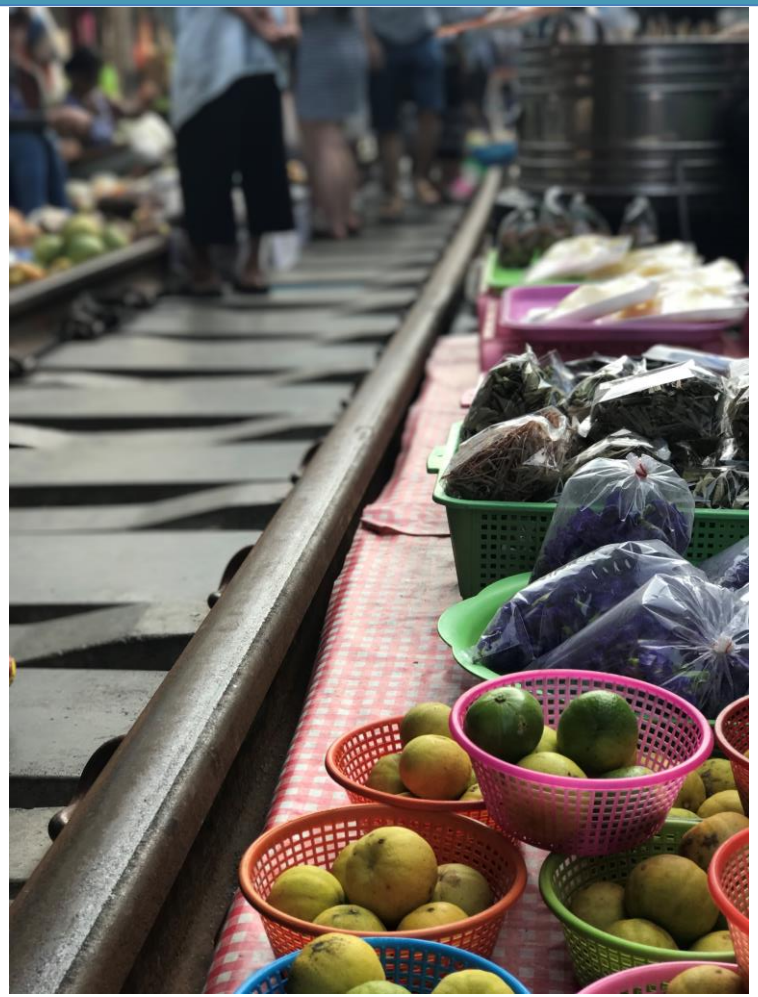
BASIS INNOVATION LAB FOR ASSETS & MARKET ACCESS

UC DAVIS UNIVERSITY OF CALIFORNIA

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

PRODUCT VALUE ASSESSMENT TOOL

- Created under the GAN, the Product Value Assessment Tool (PVAT) incorporates several important dimensions of client value into a single tool.
- Moving toward the objective of being able to compare different insurance products, and to move toward safe minimum standards for products.



USAID FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UC DAVIS
UNIVERSITY OF CALIFORNIA

PRODUCT VALUE ASSESSMENT TOOL

- Poorly designed products can create more risks than they mitigate.
- There are many factors that can totally or partially diminish client value.
- One of the most obvious risks is basis risk. Basis risk, the difference between farmers' actual losses and the performance of the index, can result in farmers' failing to receive a payout in bad years or receiving a payout when they have not suffered a loss, both of which severely erode the value of insurance.
- There are also, however, many factors related to implementation which play essential roles in determining client value.
- *"The GAN's Product Value Assessment Tool (GAN-PVAT) is based on the ILO's PACE value tool to evaluate inclusive insurance, considering four dimensions of value: Product, Access, Cost, and Experience, and adapts this tool for more complex agricultural insurance products."*

14 INDICATORS

For each indicator, the GAN-PVAT evaluation relies on a number of sources, including interviews with covered farmers, interviews with the management of the insurance company, interviews with staff and sales agents, and administrative data. Scores range from "Fail" to "Strong", and are evaluated against criteria defined in the tool itself.

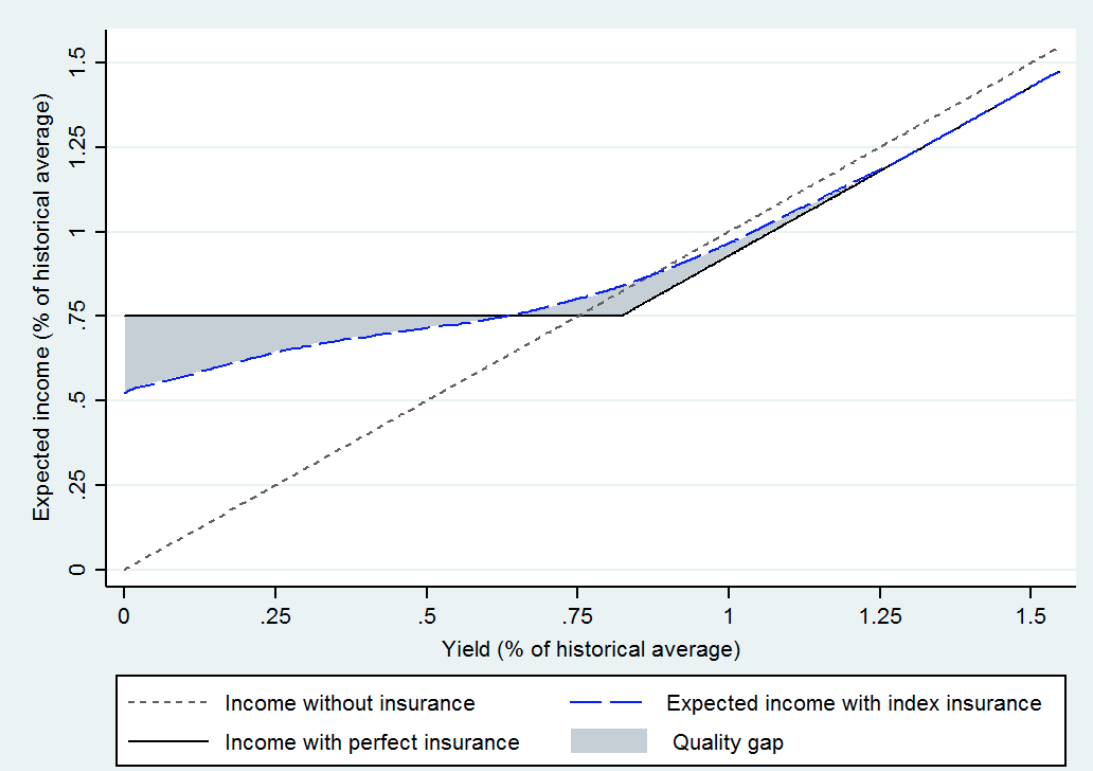
INDICATORS OF VALUE			
Index reliably predicts farmers' experience Covers appropriate activities Covers appropriate risks Makes a positive contribution to overall risk management capacity	Minimizes unintended gaps in coverage Covered farmers are adequately informed of product details Staff and sales agents are adequately trained, incentivized, and supervised to inform clients and sell responsibly Payment methods are appropriate	Delivers adequate value for money Price is affordable and accessible	Benefits are delivered in a timely manner Procedure to collect the benefit is simple and easy Provider is responsive and proactive about questions, problems, and complaints Covered farmers receive evidence of coverage
PRODUCT	ACCESS	COST	EXPERIENCE

Source: Measuring Client Value in Index Insurance, an explanatory brief. EA Consultants

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

But how can you think about quality of contract design as it compares to development objectives?

WHAT DOES INCOME STABILIZATION LOOK LIKE IN THE DATA?



The solid line is the "perfect product", which is almost be definition impossible. The dashed line is the index-based insurance product performance.

The goal is to make the shaded area - the quality gap – between the two as small as possible.

SAFE MINIMUM STANDARDS (SMS)

- A person who is averse to risk will be willing to pay more than the pure cost of insurance **IF the insurance is of high quality and pays off in times of need**.
- A good measure of the quality of insurance is **the % of the pure cost of insurance that a risk averse person would be willing to pay for the insurance**.
- In the case of satellite-based index insurance contract designed for Tanzania, a moderately risk averse person would be willing to pay up to 25% more than the pure cost of the insurance (**so the farmer would be willing to pay $12.50 for an insurance that only pays out $10 on average**);
- For an even higher quality contract that offers audit protection, the moderately risk averse person would be willing to pay up to 36% more than the pure cost of the insurance (**the farmer would be willing to pay $13.60 for the insurance that pays $10 on average**).

SAFE MINIMUM STANDARDS (SMS)

- In contrast, a poorly designed index insurance contract is one that does not reduce the risk faced by the farmer.

- Preliminary analysis of a rainfall-based index insurance in West Africa finds that the farmers willingness to pay for that insurance is 75% LESS than the pure cost of the insurance (**in this case, the farmer would be willing to pay only $7.5 for the insurance that pays out $10 on average**). **This is a BIG problem!**

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

KEY POINTS FOR POLICY

- Index insurance can enable smallholder agriculturalists to **invest more** into growth opportunities, and to **avoid costly coping strategies** when a shock occurs.
- More work needs to be done to ensure that the contracts brought to market are **quality** and **well-implemented** so they can actually protect farmers as intended and achieve development impact.
- Policy makers have the opportunity to ensure scarce resources are well-used by **making client value assessments a central part of their decision making processes**.

USAID FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UCDAVIS UNIVERSITY OF CALIFORNIA

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

THANK YOU!

Tara Steinmetz, Assistant Director
Feed the Future Innovation Lab for Assets & Market Access
University of California, Davis | basis.ucdavis.edu
tlsteinmetz@ucdavis.edu | basis@ucdavis.edu

USAID
FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR ASSETS & MARKET ACCESS
BASIS

UCDAVIS
UNIVERSITY OF CALIFORNIA

CASE STUDIES TO INVESTIGATE QUALITY

CASE #1

- Area-yield cotton insurance offered to farmers joint-liability groups
- Insurance provided on credit by the public cotton company
- Double trigger insurance (higher, cooperative level & lower, neighborhood level)
- Major risks are drought, flood, pest, etc. Rain-fed agriculture, costly coping mechanisms ex-ante & ex-post

CASE #2

- A rainfall deficit insurance
- This project is part of a regional project aimed to promote index insurance solutions
- Distributed through agricultural cooperatives, the product is a weather station-based weather index insurance for maize, groundnut and millet farmers.
- Two types of policies are available (either attached to a loan or not)
- This is also a group policy, distributed by a financial institution or agricultural organization.

QUESTIONS TO CONSIDER

Review Questions:

1. What are key questions you might ask to determine whether or not this insurance is an appropriate tool to try to have development impact?
2. What questions you can ask to assess whether the contract design is safe and responsible?
3. What other considerations must be taken into account in implementing index-based insurance to ensure client value?

For Analysis and Discussion:

1. **How do you determine priorities for insurance and agricultural risk management?**
2. **What other factors do you think needs to be taken into account in analyzing interventions, from a policy perspective?**
3. **What other resources would be necessary or helpful for you as policymakers to make informed decisions to ensure you support responsible and effective interventions?**

FEED THE FUTURE

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

www.feedthefuture.gov

USAID
FROM THE AMERICAN PEOPLE

INNOVATION LAB FOR
ASSETS &
MARKET ACCESS
BASIS

UCDAVIS
UNIVERSITY OF CALIFORNIA