

## **An example of risk transfer measures at the micro level**



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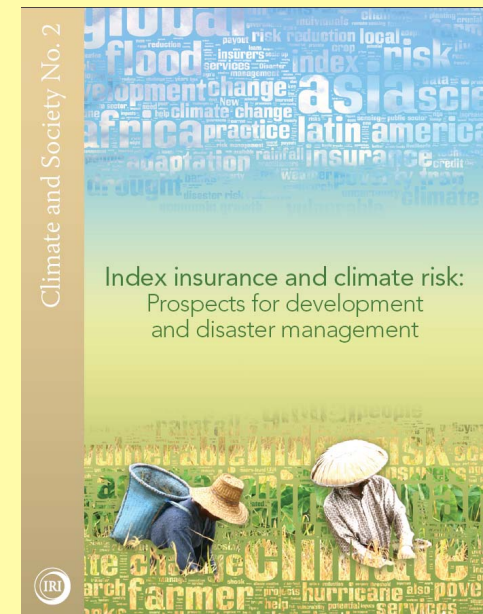
Columbia University

UNFCCC meetings, Addis Ababa, 6/2012



# IRI experience and perspective

- International Research Institute for Climate and Society
  - Enhance societies ability to understand and manage climate risk
- IRI worked since ‘early days’ of index insurance
  - Assuring solid science base
  - Linking to productivity enhancements
  - Working with farmers
  - Capacity building and training (<http://iri.columbia.edu/wiiet>)
  - Informing policy
- Projects:
  - Ethiopia, Ghana, Honduras, Indonesia, Kenya, Malawi, Mali, Nicaragua, Nigeria, Philippines, Rwanda, Senegal, Tanzania, Uganda, Uruguay, Argentina...
  - Purchased by tens of thousands of farmers
  - **Highly demanded, quickly scaling**
  - **Significant impacts**



# Some questions

1. Cost-effectiveness of microinsurance?
2. Resource requirements, enabling environments?
3. Lessons learned from public/private/academic partnerships: design, limitations, challenges, best practices?
4. Links/synergies between risk reduction and risk transfer, comprehensive toolboxes?



To answer, we must ask:  
**What is adaptation problem?**



# Climate change and adaptation

- For many, climate change is
  - More bad years/worse bad years
- Adaptation: increase productivity in normal/mediocre years to cover bad years
- But strategies that increase productivity in most years face increased risk in bad years
  - Eg: a loan for improved seeds that cannot be repaid if rainfall ends early and kills high yielding crops
- Threat of 1 drought year out of 5 prevents other 4 from being much more productive
- Key to adaptation is to relax risk of bad year to unlock productivity options



# Why Index Insurance (micro/meso)

- Insurance for farmers/banks/coops/communities
  - to reduce risk enough to be able to unlock productivity, adaptation
- But problems with traditional insurance have made it challenging to implement
- Recent index innovation Insure weather index not crop
  - For example: provide payout if there is drought
  - Cheap, “easy” to implement, good incentives
  - **Reduce key risks enough to take productive chance**
  - **Not comprehensive risk transfer—most risk remains**
  - **Many, many limitations**
- **Still in early years**
  - **Most work has focused on demonstrating insurance is possible, not engineering the pieces of sophisticated adaptation package**
  - **Early projects focus on # policies sold instead of viability/solving adaptation problems**



# Index insurance overcoming barriers

- **Some initial concerns**
  - Can the very poor be reached?
  - Will poor people buy insurance?
  - Can insurance scale?
- **Examples of these barriers starting to be broken:**
  - **Some of the poorest farmers in the world being reached**  
eg: Ethiopia (HARITA)
  - **Some poor farmers are purchasing at higher rates than seen for traditional insurance products in US**  
eg: Kenya (Kilimo Salama), Ethiopia (HARITA)
  - **Some projects are scaling very fast**
    - Unsubsidized scaling: couple hundred farms to tens of thousands in 2-3 years. eg: Kenya (Kilimo Salama), Ethiopia (HARITA)
    - Subsidized scaling: to tens of millions in less than a decade



**New questions:**

**How? Responsible? Adaptation?**





# Elements of success

- **Engineered to be production enhancing**
  - Insurance like loan, when used alone
    - **YOU LOOSE MONEY**
  - Need to use to increase productivity
    - To adapt to climate change
    - To pay for insurance premium
  - Design starts with
    - **How to make productive risktaking possible**
    - NOT how to correlate payouts with loss
- **Science based**
  - Meaningful collaboration with scientists
  - Don't use science naively or irresponsibly
  - Science is only a tool, not the designer
- **Farmer driven**
  - Farmers formally drive product design
  - Share ownership, responsibility
  - Only they know their situation
  - Only they can build insurance into own adaptation choices



# Example of Insurance for Adaptation

- **Horn of Africa Risk Transfer for Adaptation (HARITA)**
- Starting point
  - **WAS NOT about insurance**
  - **WAS R4 adaptation strategy**
    - Community Risk reduction
    - Productive Risk taking
    - Risk reserves
    - Risk transfer (insurance)
- Utilized networks, communities, expert activity
  - Adaptation, climate risk management, agricultural production, community leadership, microfinance
  - Insurance piggybacks on existing networks
  - Insurance compliments other risk management (eg community savings) so each is most cost effective for its role
  - Farmers purchase insurance with risk reduction labor or cash
- Some Partners: Oxfam America (PSD, HARO, HRD), SwissRe, IRI, REST, DECSI, NYALA, AIC, Ethiopia Met Service, Rockefeller, Mekele University, WFP (my apologies to others)





# Design Features

- **Built upon African Satellite Technology**
  - Ethiopian National Meteorological Agency developed unprecedented ENACT satellite product
  - Being replicated in additional countries
- **Simple insurance menu targets simple things**
  - Eg: did season end early?
  - Easier for farmers to participate in design/validation
  - Satellite technologies more robust
  - **Allows farmer to tailor to unlock productivity**
- **Village based design process**
  - Parameters directly generated from village meetings
  - Scientists, farmers, experts, review satellite data and software outputs, each with formal decisionmaking authority
- **Fast scaling, high demand, significant impacts**
  - 2009 1 village/200 farms, 2011 43 villages/13,000 farms, 20-30 percent of village buys in ~4 hour sale
- **Farmers tell us adaptation story:**

*“The insurance let me take out loan for fertilizer so I could finally get good yields when rain came”*



# Invert discussion

1. **What is adaptation problem to solve?**
  2. Engineer to links with risk reduction and risk transfer, comprehensive toolboxes
  3. Public/private/academic partnerships/design
  4. Cost-effectiveness of microinsurance determines role
  5. Resource requirements, enabling environments built on 1-3
- See CSP2 for literal answers  
<http://iri.columbia.edu/csp2>





Thank you

