An example of risk transfer measures at the micro level

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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**

Climate and Society No. 2

Index insurance and climate risk:
Prospects for development
and disaster management
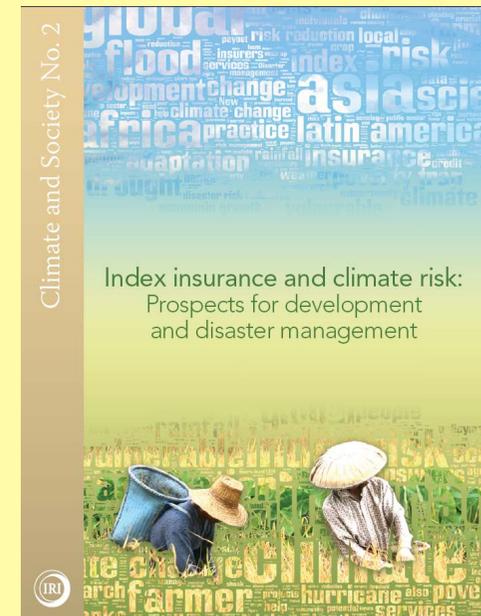
Some questions

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 tansfer—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**

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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
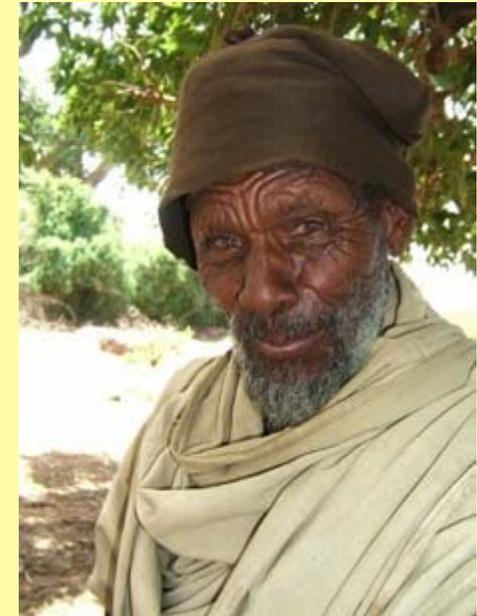
New questions:

How? Responsible? Adaptation?

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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 **R**isk reduction
        - Productive **R**isk taking
        - **R**isk reserves
        - **R**isk 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