Customized Community-Based Microinsurance for Climate-Related Risks

CSE Annual Two-Day Media Briefing on Climate Change for South Asian Journalists
18th to 19th September, 2013, New Delhi, India
Dr. David Dror
• Challenges of existing microinsurance schemes to address health, crop, livestock and natural catastrophe risks
• Community’s need for customized microinsurance
• MIA’s experience with community-based microinsurance and climate-related risks
Climate-related risks

• Associated with range of hazards
  • slow onset (e.g. increase in average temperature)
  • Or suddenly (extreme weather events)

• Unequally distributed

• Resource-poor communities in developing countries suffer most

• Affect human health, agriculture, livestock, assets, livelihood in general of individuals, families and communities
What is Climate Change?

Climate Change

• Change in long-term weather patterns / distributions
  • E.g. mean or variance/variability of certain weather parameters
  • Statistically significant
  • Any cause e.g. natural internal processes, external forcing, anthropogenic

• Alters risks

• How to distinguish climate trends from normal fluctuations?
Climate Risk Example: Floods in Bihar

- Bihar is India’s most flood-prone state (73% of area, 76% of population)

- Kosi Flood in August 2008:
  - Heavy monsoon rains, poor maintenance → embankment breach
  - Affected ~3 million people in Bihar, killed hundreds of people and livestock, destroyed 300,000 houses and damaged at least 340,000 ha of crops

Flooding are a recurrent risk in Bihar: every year

Life and health, crop and livestock of people are affected simultaneously

Not much done by government/state and other agencies except post-disaster
Challenges with Existing Microinsurance Schemes

- Risks not considered holistically
- Supply-driven
- Dependency on subsidy to premium
- Lack of local data
- Lack of trust
- Inefficient business processes

Low voluntary uptake
What is needed?

- Needs-driven approach
- Offered insurance has to be relevant
- Risks have to be viewed holistically for BoP people
- Value proposition of insurance has to be understood

- Insurance failures to be reduced
- Operational costs to be minimized
- Location-specific data (frequency & severity of events)
- Actuarial pricing
MIA’s experience:
6 essential features for success

Involvement of group in scheme governance

Proximate and simple

Affordability

Trust-worthly process

Context-relevance

Responsive to perceived priorities
Awareness Building

Vaishali & Ahmednagar

1. Street play
2. Posters
3. Flip books
4. Songs
5. Brochures
6. Movie
7. Animation Games
8. Treasure Pot
9. Dart
10. Slide/Snake & ladc
11. Wheel of fortune
MIA’s Experience: Prioritized Risks

Must respond to perceived, prioritized risks

Hospitalization
Livestock (Illness, Death)
Uns timely Rainfall
Calamities
Understanding the Risks and Needs: Baseline

Study Design and Tools
- Structured questionnaire
- Focus Groups Discussions (FGD)
- Key Informant Interviews (KII)

Sample Size
- >50 FGDs
- >60 KIIs
- 4200 HH interviews (2/3 control group, 1/3 intervention group)
  → >20,000 individuals covered

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<tr>
<th>Intervention Area</th>
<th>Bihar</th>
<th>Maharashtra</th>
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<td><strong>District</strong></td>
<td>Vaishali</td>
<td>Ahmednagar</td>
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<td><strong>Blocks</strong></td>
<td>Biddupur</td>
<td>Hajjipur</td>
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<td><strong>Villages covered</strong></td>
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<td>7</td>
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<td><strong>Household Interviews</strong></td>
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Risk Assessment in Ahmednagar (Maharashtra) and Vaishali (Bihar)

Ahmednagar (Maharashtra): Effect of vicinity to water body and slope on percolation in semi-arid area

Vaishali (Bihar): Effect of vicinity to water body and slope on flood-prone area
MIA’s Experience: Proximate and simple solutions

Proximate: everything localized (info, claim submission, payments)

Simple: what we can explain we can understand
ARC and MIA Experiences: Involve the Community at every step

- Information gathering
- Insurance package design
- Business process design
- Selection of insurance awareness tools
- Administration: enrolment, claim settlement, renewal

Pictures of training campaign (street play, snake & letter, CHAT: tool for consensus finding on insurance package)
Microinsurance for Climate-Related Risks

Goal: Enhance the resilience of vulnerable communities to CC by developing pro-poor microinsurance solutions.

- Project Partners
  - MIA
  - BASIX

- Field Implementation Partners
  - NIDAN
  - VASFA
  - WOTR/Sampada Trust

Vulnerable communities accepted and adopted CC insurance models
- Need and benefits of CCMI. Insurance tools, processes and packages. Pilots.

Knowledge and innovation shared and disseminated.

Inputs for policy, regulatory and institutional contexts developed
- Mechanics to produce recommendations for policy and regulatory improvements.
Composite Risk Packages & Multiple Underwriting

Composite packages covering multiple risks

Multiple underwriting approach

Health
- Vector borne diseases
- Epidemics
- Zoonosis

Livestock
- Droughts
- Floods
- Hurricanes
- Livelihood
- Food security

Crop
- Infrastructure
- Property

NAT CAT
- Landslides
- Infrastructure
- Property
- Food security

Reinsurance Underwriter
Commercial Underwriter
Mutual Aid Underwriter

September 2013
**Intervention Areas (2012-2014)**

**Area:** Vaishali (North Bihar)  
**Partners:** NIDAN, VASFA

District: Vaishali  
Blocks covered:  
• Vaishali  
• Biddupur  
• Hajipur

**Area:** Ahmednagar (Maharashtra)  
**Partners:** Sampada Trust

District: Ahmednagar  
Blocks covered:  
• Karjat  
• Shrigonda
Risk Assessment Findings

- Time-series of precipitation, temperature, yield etc. alone are not sufficient for defining/developing parametric crop insurance
- Risk assessment shows spatial variations due to proximity of water bodies and land slope → importance of location-specific details
- Other topographical characteristics, such as soil and groundwater depth are also important risk factors
- Existing insurance solutions do not consider these parameters
- Challenges for parametric crop insurance
  - Gaps in weather data from reliable sources
  - Access to live-stream of weather data to determine pay-out
  - Availability of reliable historical crop yield data on village or block level
Illustration of De-trending of Climate Change Contribution

Crop yield under “normal fluctuations”

Who?.... Individual

Crop yield under “normal fluctuations” & climate change impact

Who shall pay for increment of risk due to climate change?
→ Transfer climate change related cost element to risk subsidy
THANK YOU!