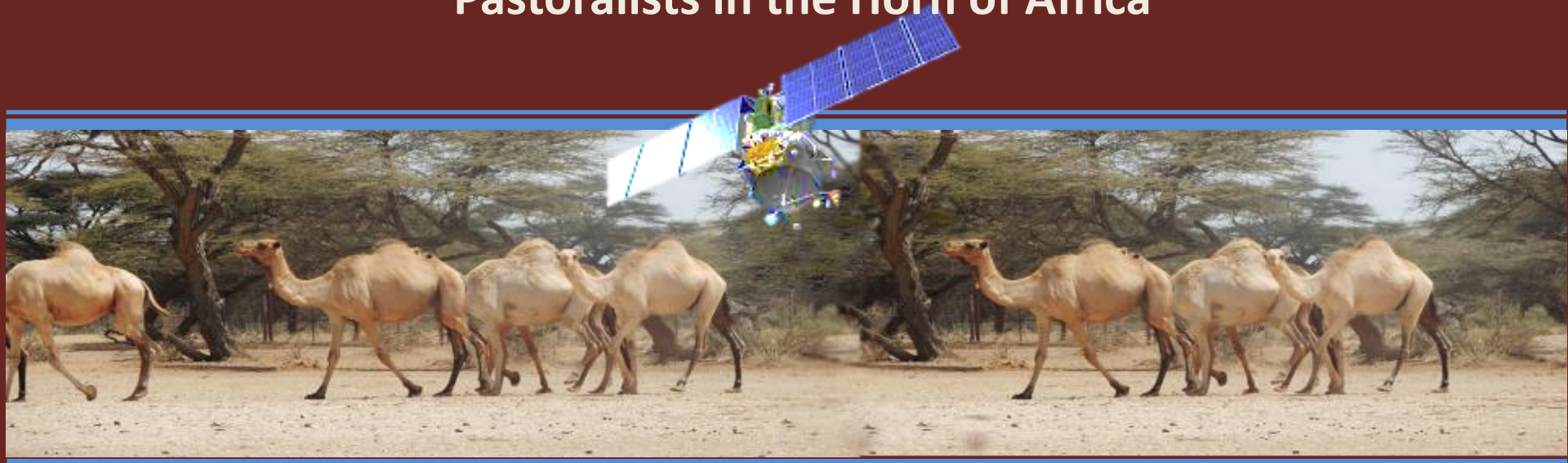
Climate Adaptation through Market-based Risk Transfers: Progress with, and Prospects of, Index-based Livestock Insurance (IBLI) for Pastoralists in the Horn of Africa



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ILRI INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

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RESEARCH PROGRAM ON Dryland Cereals

OUTLINE

1. The Context – Features of Dryland Pastoral Systems
2. Understanding Index Insurance – Index-based Livestock Insurance (IBLI) in Perspective
3. The IBLI Story in a Nutshell
4. Progress with IBLI in the Horn of Africa (HoA)
5. Towards a Sustainable IBLI
6. Conclusion

1. The Context – Features of Dryland Pastoral Systems

- Marginal environment.
- Livelihoods tend to have a regional dimension.
- Mobility; yet, pastoralists pursue 'multi-resource economies'.
- Dependence on livestock – pastoralism both a "mode of production" and a "mode of perception".
- Livestock are the main source of income from sales of milk, live animals and animal products.
- Exports of livestock and livestock products in HoA over $1billion annually - 90% from pastoral flock.

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1. The Context (Cont'd)

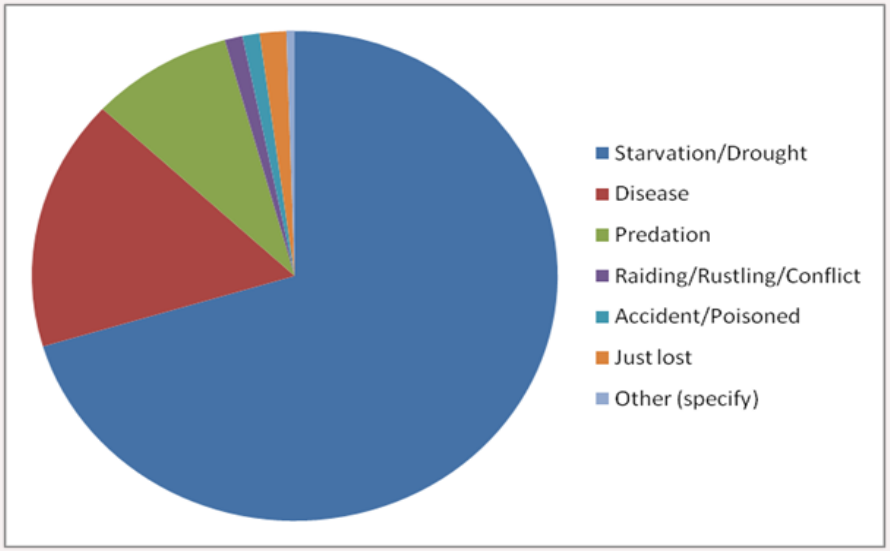
- Pastoralists are renowned for their immense indigenous knowledge – response to drought.
- Pastoralists adapt to market demands.
- Mobile technology has helped spur growth in pastoral areas.
- Herd loss risk due to major droughts identified as the major source of vulnerability facing pastoralists.

1. The Context (Cont'd)

- Resilience to droughts further strained by increasing climate variability, population, evolving land tenure, etc.
- Weakening of indigenous response systems consequent upon changing underlying dynamics.
- Increased climate variability & rising population pressure have pushed the already marginalised and vulnerable pastoral communities further into poverty trap.
- Standard/conventional responses – food aid, cash aid post-drought restocking – are often slow, insufficient and expensive.

1. The Context (Cont'd)

Cause of Livestock Mortality



- Drought is by far the leading cause of livestock mortality

Source: ILRI Project baseline 2009 (924 Marsabit Households)

- Studies from **Ethiopia** and **Kenya** show it is generally more cost-effective to keep core breeding stock alive during droughts than to restock animals after the event.
  - **Northern Kenya**: 3 times more expensive to restock a core herd of sheep and goats than keep animals alive through feeding
  - **Afar region, Ethiopia**: restocking sheep and goats costs about 6.5 times more than supplementary feeding. Restocking cattle costs 14 times more than feeding

Source: Pastoralists Livelihoods Initiative, Ethiopia. Policy Brief. November 2007

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2. Understanding Index Insurance – Index-based Livestock Insurance (IBLI) in Perspective

- A need for instituting effective drought risk reduction approaches and technologies.
- *Insurance* as a missing link in integrated risk management endeavours:
  - improved resource management (*risk reduction*)
  - livelihoods diversification and microcredit (prudent *risk taking*)
  - savings (*risk reserves*)
  - insurance (*risk transfer*)
- Conventional commercial insurance not viable due to
  - high transactions costs
  - moral hazard & adverse selection

2. Understanding Index Insurance: IBLI in Perspective (Cont'd)

- Index Insurance
  - is an innovation in insurance design particularly suited to climate risk & the pastoralist production system.
  - does *not* insure individual losses.
  - Insures an "index" measure that is strongly correlated with individual asset losses.

- Index needs to be: objectively verifiable; available at low cost in real time; not subject to manipulation by either party to the contract.

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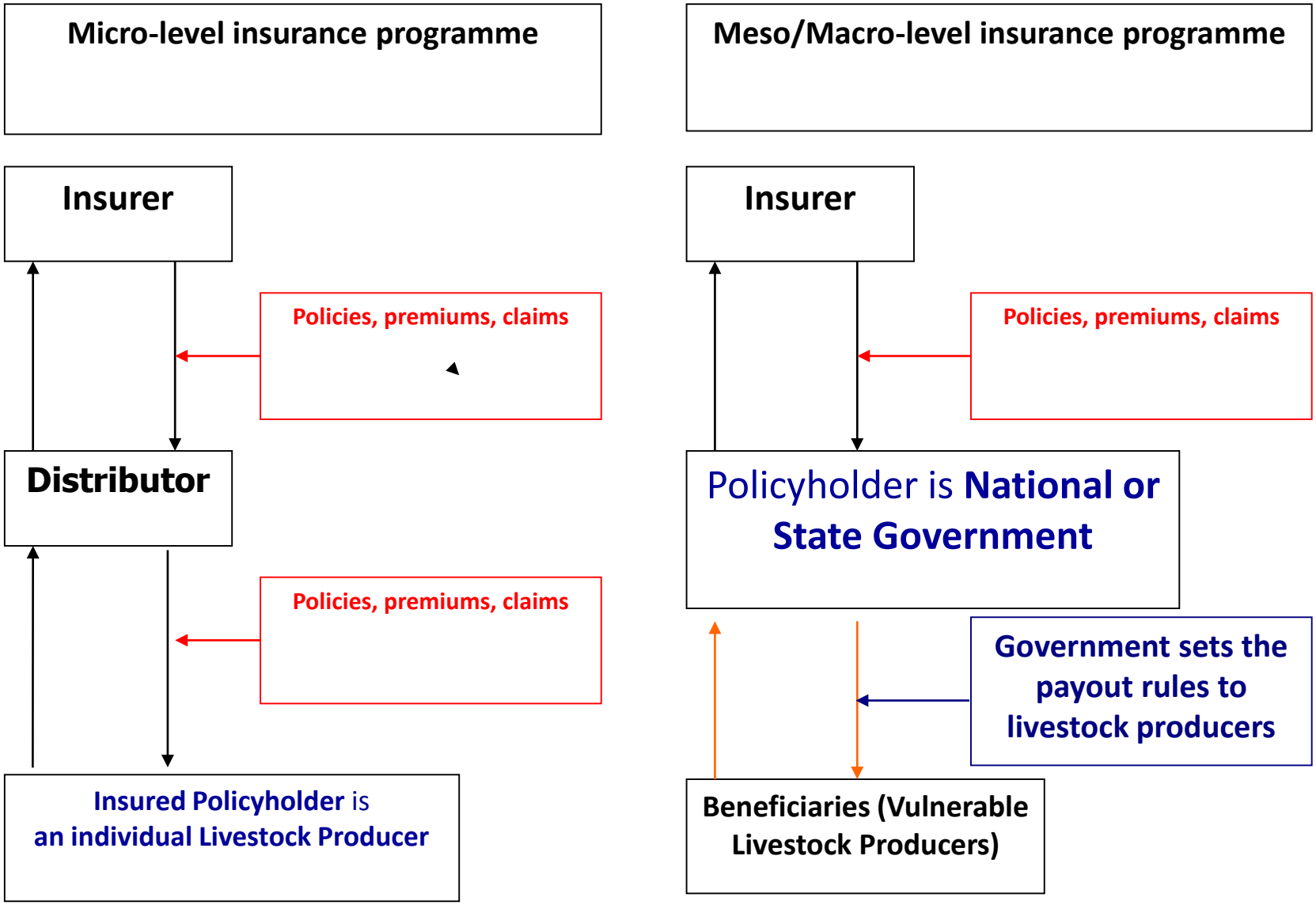
2. Understanding Index Insurance: IBLI in Perspective (Cont'd)

- IBLI:
  - insurance against forage scarcity.
  - insures based on remotely sensed vegetation index (Normalized Difference Vegetation Index - NDVI) – a satellite-based indicator of forage availability.
- IBLI is an "***asset protection policy***" to keep core breeding animals alive during severe droughts when pasture/grazing are depleted.
  - Triggers – the index threshold below which payouts are made.
  - timely payouts are made to the pastoralists to purchase resources needed during drought season – such as feed, water, and medicine for livestock.
  - reduces or avoids distress sale of assets.

2. Understanding Index Insurance: IBLI in Perspective (Cont'd)

- In 2008, ILRI – in collaboration with Cornell and UC Davis - launched IBLI as an R&D agenda.
- IBLI implementation: a PPP, initiated with technical support from the International Livestock Research Institute (ILRI), the World Bank (WB) and several other development partners.
- IBLI can be rolled out either as a micro-level or as a meso/macro-level insurance programme.

2. Understanding Index Insurance: IBLI in Perspective (Cont'd)



3. The IBLI Story in a Nutshell

KENYA

- First product offered in *Marsabit* county (Northern Kenya) in 2010 by a consortium of partners supported by the GoK.
- 2011 drought triggered contract payments in all covered areas serving as an important proof-of-concept indicator.
- 2012 IBLI began to scale in Kenya beyond pilot site in Marsabit into *Isiolo* and later *Wajir*.

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3. The IBLI Story (Cont'd)

- 2013 GoK invites World Bank to help develop Crop and Livestock Agricultural Insurance Program. ILRI requested to support the livestock component.
- October 2015, Kenya Livestock Insurance Program (KLIP) issued first policies to 5000 pastoralist households in two (2) counties.
- KLIP has further scaled provision of IBLI across eight (8) counties and attracted more players and increased investment – particularly with substantial payouts in 2017/2018.

3. The IBLI Story (Cont'd)

ETHIOPIA

- IBLI Borana launched in August 2012
  - Since its introduction more than 14,000 pastoralists have purchased IBLI
  - Total sum-insured is Birr 80,780,700 (or about USD 3 million)
  - OIC - Underwriter
  - Five payouts made – the largest in 2017 (Birr 7 million and more than 2,500 pastoralists) and in 2019 (Birr 5 million and 3,000 pastoralists)
- IBLI pre-feasibility studies were carried out in Afar & Somali regions.
- ICRC are considering IBLI roll out in East Hararghe Zone, ONRS
- MoA - discussing options for scaling IBLI under a broader agricultural insurance policy/programme.

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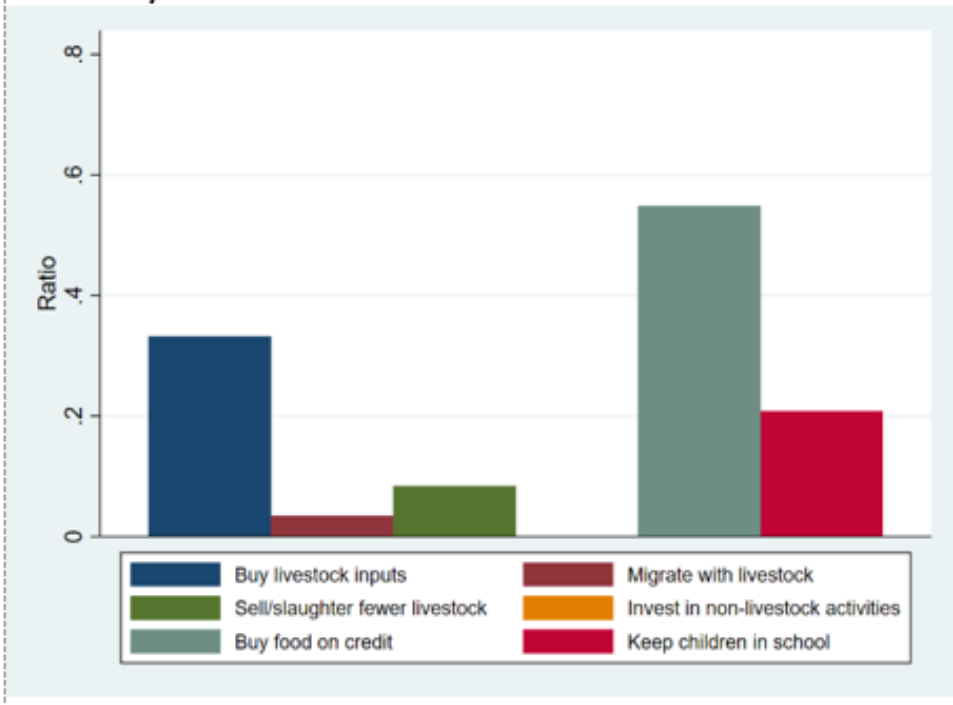
3. The IBLI Story (Cont'd)

IBLI has engendered considerable socioeconomic impact

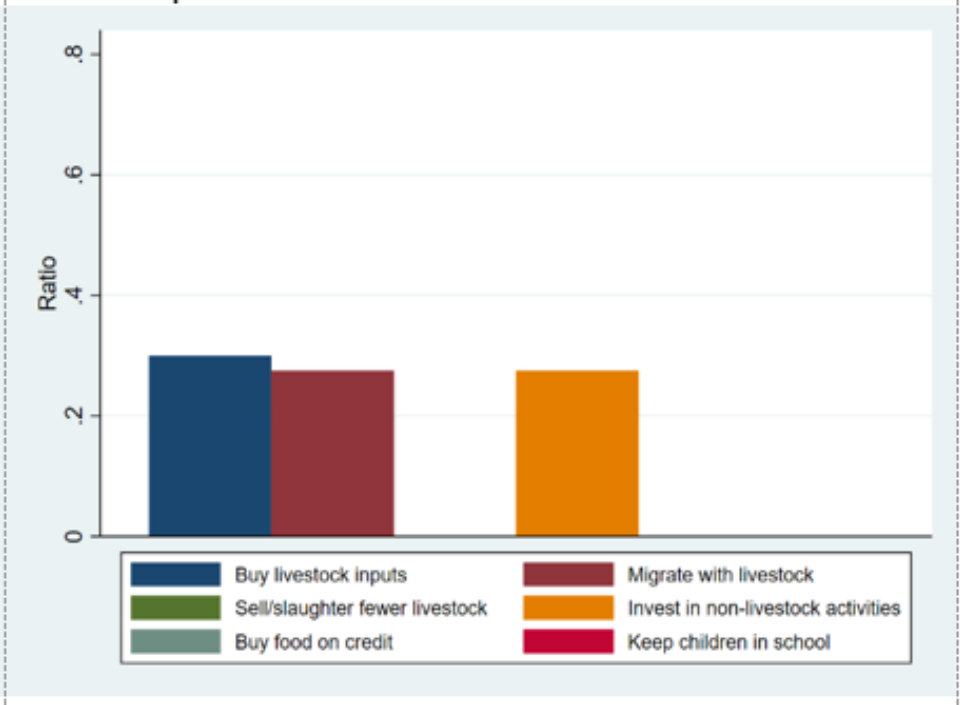
- 36% reduction in likelihood of distress livestock sales
- 25% reduction in likelihood of reducing meals as a coping strategy, especially (43%) among those with small or no herds

Figure 3. Ratio of households that adopted each coping strategy when they heard of upcoming payouts.

3.a. Kenya.



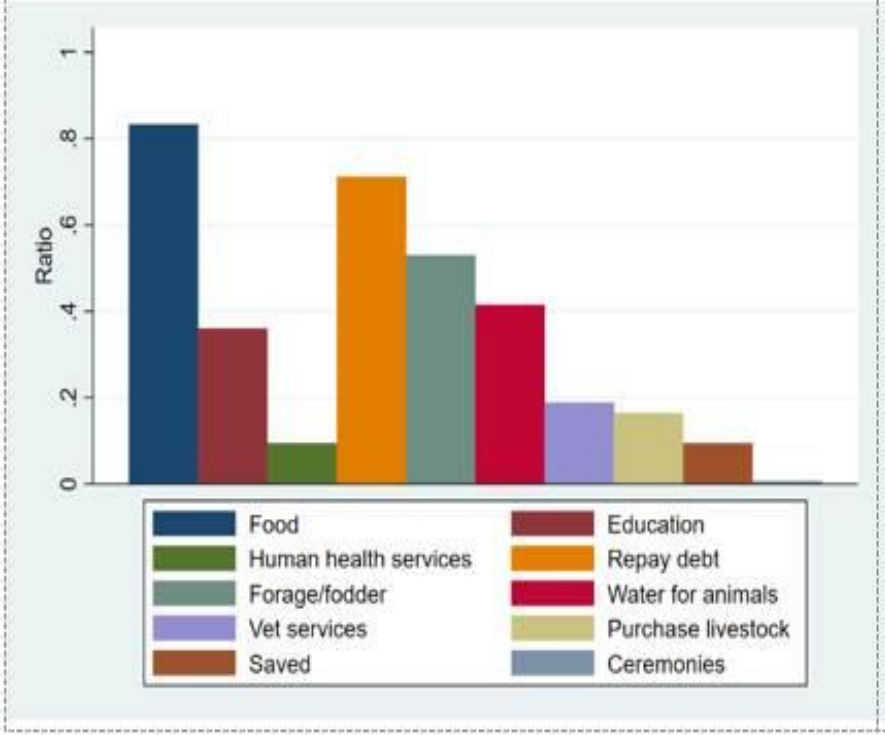
3.b. Ethiopia.



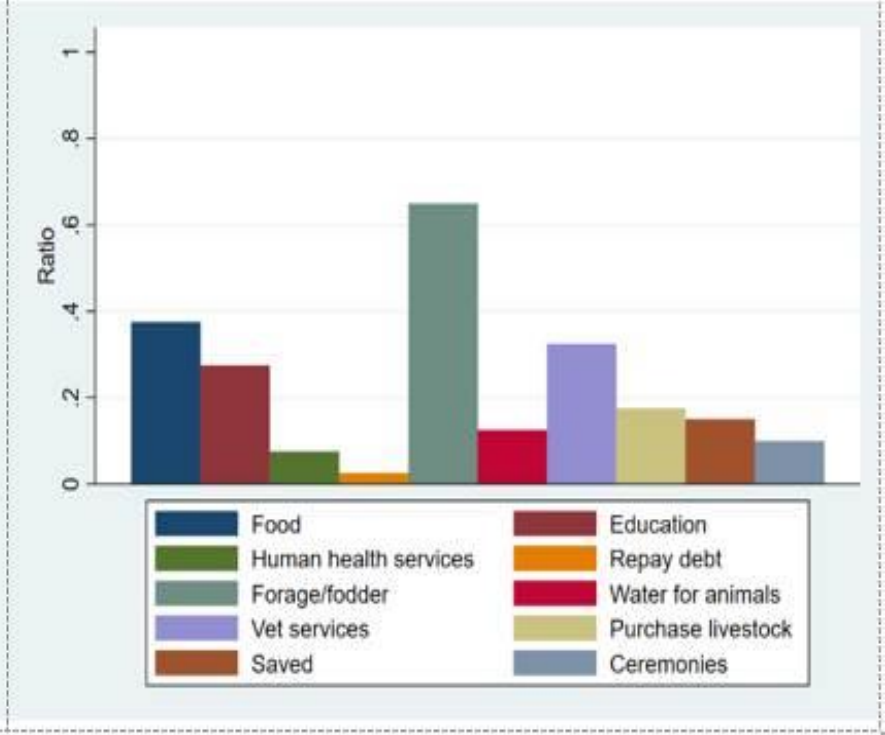
3. The IBLI Story (Cont'd)
(Utilization of indemnity payouts)

Figure 4. Ratio of households that received a payout and reported using indemnity payouts for each activity.

4.a. Payout utilization by households in Kenya.



4.b. Payout utilization by households in Ethiopia.



3. The IBLI Story (Cont'd)

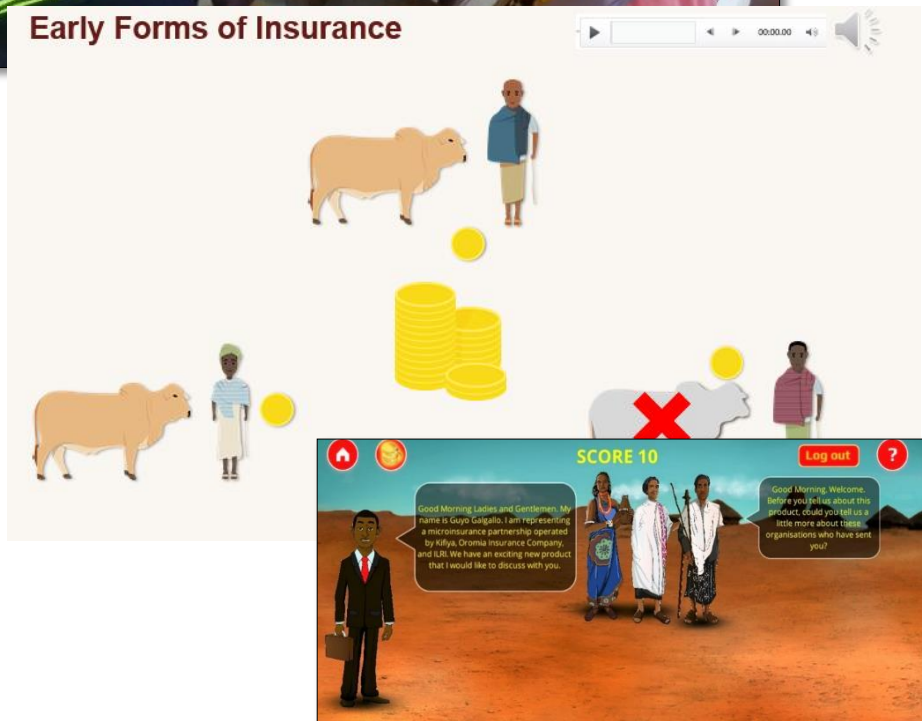
Capacity Development, Training, Extension and Marketing

- Catalyzing demand among different stakeholders across the value chain
- Critical for ensuring impact and scaling efficiently
- Unlocks a rich and important new research agenda

Level 1: Knowledge and tools for government and insurance industry policy makers

Level 2: Knowledge, skills and job aids for IBLI/sales agents and promoters

Level 3: Awareness raising for potential clients



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4. Progress with IBLI in the Horn of Africa (HoA)

- **HoA countries are at different stages of development in terms of embracing IBLI.**
  - The product has successfully been piloted/implemented in Kenya and Ethiopia.
  - Technical, socio-economic and operational feasibility studies have been completed in Somalia.
  - A pre-feasibility technical assessment conducted in Uganda.[Growing interest and initial feasibility work in Niger and Senegal.]

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4. Progress with IBLI in HoA (Cont'd)

- **As part of an ILRI-IGAD platform:**
  - Awareness has been raised in Djibouti, Eritrea and South Sudan regarding IBLI – and initial interest to undertake pre-feasibility has been expressed.
  - Countries and the private sector expressed interest in a regional implementation approach, the benefits of which include the following:

4. Progress with IBLI in HoA (Cont'd)

- **Peace building**: cross border movements in search of forage and water can increase the risk of conflict.
- **Sustainability**: a larger pool of insured risks is essential for the financial sustainability of an insurance scheme and can also contribute to reducing insurance premiums for the pastoralists.
- **Share infrastructure**: many fixed costs for an insurance scheme can be shared.
- **Competition**: crowding in competition for service provision.

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5. Towards a Sustainable IBLI

- Scaling and sustaining IBLI require a range of technical, institutional and policy considerations:

- *Investment in in-depth studies*
  - Understand the local context: scaling IBLI requires context-specific robust studies
    - Bio-physical; socio-economic; institutional
    - Client engagement and feedback

5. Towards a Sustainable IBLI (Cont'd)

- *Technical rigour in contract design*
  - the backbone of index insurance
  - minimise *basis risk* (i.e., mismatch between the index estimate of an individual's loss and a pastoralist's actual loss).
  - Bundling as an option?
  - Premium subsidies?

5. Towards a Sustainable IBLI (Cont'd)

- *Establishment of informed effective demand*
  - Strengthen stakeholders' capacity
    - Intended beneficiaries/clients
    - Insurance companies

- *Availing low cost and efficient delivery mechanisms*
  - Limited infrastructural amenities and costliness of delivery of IBLI services.
  - Mobile and digital solutions

5. Towards a Sustainable IBLI (Cont'd)

- *Forge programme-level partnerships*
  - Engage intermediaries/NGOs to partner in service delivery and/or to bear aspects of the premium.
  - Recognise that insurance needs to be delivered as part of a package.
- *Conducive policy and institutional infrastructure*
  - Explore opportunities for integrating IBLI into broader programmes of development & climate risk mg't.
  - Address policy/regulatory concerns.
    - e.g. How is risk underwritten through the humanitarian assistance schemes?
    - How is the micro insurance industry treated?
  - Advocacy for infrastructural investment.

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6. Conclusion

- Insurance needs to be delivered as part of a package.
- Scientific excellence, leveraging on technologies, careful communication and client-drive are key for scaling and sustaining IBLI in the HoA.
- Investment in policy and addressing regulatory challenges facing the micro insurance business are central for scaling IBLI. *No country has advanced its rural production system by projects alone*.
- For IBLI to take roots, forging effective partnership between research, private sector, advocacy and development actors is essential.

6. Conclusion (Cont'd)

- Information for informed decision: Comprehensive awareness training aimed at community members, 'implementers' and policy makers.
- Building the livestock value chain – especially the feed/fodder market - is critical for instituting and sustaining IBLI.
- Instituting index insurance among pastoralists requires long-term strategies of engagement.
- Experience sharing among HoA countries is important.

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“Every dollar spent in on early interventions can save up to USD8 in disaster response, with insurance being at the heart of pre-financing”
Center for Disaster Protection