Index-Based Insurance for Risk Management in Agriculture

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A few housekeeping items before we begin:

1. **Questions & Comments** – Verbal capabilities have been turned off. However, questions or comments can be submitted by clicking on the Q&A icon at the bottom of your screen. We will answer questions during the Q&A session at the end of the presentations.

2. **Recording and presentation** – A YouTube recording along with the presentation will be made available on the IAA website within the next day or so.
Introduction: What is Index Insurance
Index Insurance

- Index insurance is an innovative approach to insurance provision that pays out benefits based on a pre-determined index or loss of assets and investments resulting from weather and catastrophic events, without requiring the traditional services of insurance claims assessors. It also allows for the claims settlement process to be quicker and more objective.

- Agricultural index insurance is a tool for risk management that has shown significant promise for promoting sustainable development and resilience.

- Index insurance can help small-scale farmers and pastoralists to increase their resilience to weather shocks like drought or flood while encouraging investments in productivity that in good years create a pathway to prosperity.
• This webinar will provide an overview of agriculture and index insurance as well as related issues such as data, pricing, and types of index insurance. The webinar will also focus on the impact and implications of index insurance for practitioners and policymakers.

• We will purpose to answer the following questions
  – What is Weather Index Insurance.
  – How Does Index Insurance Work.
  – Designing and Pricing Weather Index Insurance.
  – Impact and implications of index insurance – Viability?
Parametric insurance relies on the measurement of a natural phenomenon or index, such as:

- Earthquake magnitude/intensity
- River flooding
- Excess/lack of rainfall
- Heat/cold waves

Payout of pre-defined amount is made when contractually agreed threshold of parameter/index is exceeded (e.g., intensity of earthquake or amount of rainfall).

Fast payout

Otherwise, **uninsurable** risks can be insured (e.g., emergency costs, loss of revenues)

No loss **assessment** required

**Flexibility** in the use of funds

**Transparency** to both insurer and insured

Avoids **adverse risk** selection

**Challenges** to be addressed

- **Basis risk** (insurance payout may deviate from actual loss)
- Need of objective and accurately measured data, required both to price and observe the index

*Credit: Swiss Re*
How Does Index Insurance Work?
Designing and Pricing Weather Index Insurance?
Impact and implications of index insurance – Data, Regulations, Viability?
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References

- Mapfumo et al. (2017) Risk modelling for appraising named peril index insurance products. World Bank
- IRI-WB (2009) Designing index-based weather insurance for farmers in Central America
For Information:

1. **Questions & Comments** - Should you have any questions or comments they can be sent to the IAA Secretariat at technical.activities@actuaries.org and they will be forwarded on to the presenters directly on your behalf for a response.

2. **Presentation and Recording** – A YouTube recording of this webinar will be made available on the IAA website at www.actuaries.org under the Events/Webinars tab within the next few days.
Thank you