

# Info Note

## State of index-based crop insurance services in East Africa

*Findings from a scoping study to establish the state of index-based crop insurance services in Kenya, Tanzania and Uganda*

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### Key messages

- There is high evidence that index-based crop insurance can work for resource-poor smallholder farmers and value chain actors but uptake is still low in East Africa.
- Index-based agricultural insurance is gaining increased attention among stakeholders in East Africa as a strategy for adapting smallholder agriculture to climate risk.
- The main barriers to index-based insurance penetration are limited awareness and access as well as unaffordable insurance products.
- There is need for comprehensive sensitization, designing insurance products that are affordable and meet consumer demand and strengthening local capacity for implementation and coordination.

### Background

Index-based insurance is increasingly recognized as an important risk management tool against the impacts of climate change and variability. Index-based insurance differs from traditional insurance because compensation is done based on the losses of a specific client. The insurance avoids costs related to assessing and validating policyholder losses and minimizes moral hazard and adverse selection problems, given that policyholders cannot affect the

distribution of payouts ex ante and the historical distribution of the index is observable to both the insurer and the policyholder (Miranda and Farrin 2012). For these reasons, index-based insurance offers a potentially cost-effective means of managing smallholder production risks and has the potential to strengthen resilience by cushioning the risk of losses and debt. However, the uptake of index-based insurance is still low among farmers in developing countries. Is this the case in East Africa? This study sought to answer the question by assessing the state of index-based crop insurance services in Kenya, Tanzania and Uganda. The study was conducted as a requirement for the Climate Resilient Agribusiness for Tomorrow (CRAFT) project, under strategic objective four which aims at increasing incomes for smallholder farmers and small and medium enterprises (SMEs) through increased adoption of climate-smart practices and technologies.

### Study approach

Data on insurance potential, gaps, barriers and opportunities were collected through peer-reviewed literature and policy documents, key informant interviews with officials of governments, private sector, NGOs, focus group discussions with two groups in Nyando Climate-Smart Village (CSV), and semi-structured, “fill-and-return” questionnaires administered on key informants. A perception-based Multi-Criteria Analysis (MCA)<sup>1</sup> was used in the questionnaire to determine the place of insurance as an adaptation strategy, to get a sense of its potential to be addressed under current priorities for each country. The MCA was based on a set of attributes or indicators provided to the respondents in a Likert Scale Scoring Matrix of 1 (low priority), 2 (medium priority) and 3 (high priority). The main

<sup>1</sup> MCA is a decision-making tool that is particularly applicable to cases where a single-criterion approach (such as cost-benefit analysis) falls short, especially where significant environmental and social impacts cannot be assigned monetary values. It is a simple and intuitive way to explain why a solution has been chosen. MCA allows decision makers to include a full range of social, environmental, technical, economic, and financial criteria. The method is based on the evaluation of

actions by means of a weighted average. Thus, it can be used to choose, for example, which policy option of the project best fits the main features (criteria). It can also be used to identify the possible scenarios that can best match expectations of decision makers.

criteria were socioeconomics, ecology, technical feasibility, finance, climate, equity, partnerships, policy alignment, and probability of action.

## The state of index-based insurance in East Africa

The findings on potential for index-based crop insurance in East Africa (see Table 1) show that there have been efforts in all three countries to promote it. However, many of the index-based insurance innovations rarely move beyond pilot phases. Premium affordability, financial illiteracy, farmers' trust in insurance providers, inadequate awareness and low willingness to pay have been pointed out as major constraints that prevent scalability of pilot index-based insurance projects. In recent years, however, there has been an increase in index-based insurance scaling programs to help value chain actors de-risk production and investments. For instance, in Kenya, piloting of index-based insurance began in 2006 and in 2009, the government started a scaling program (Government of Kenya 2019). The insurance covers drought, excess rainfall and storms (for maize, sorghum, coffee, sunflower, wheat, and potato).

In Tanzania, index-based insurance has been piloted since 2014 for various crops – maize, beans, sunflower, barley, paddy, cotton, and soon cassava – across the country but has not yet been taken to scale. In Uganda, a few pilots were also implemented but were not taken to scale except for one example – the Market-led User-owned ICT4Ag-Enabled Information Service (MUIIS) project.

MCA results show that insurance ranks 4th out of 11 strategies that East African countries can implement under climate change. Insurable risks, which fall within financial risks, rank second among seven agricultural risk factors assessed (Figure 1). However, potential to improve access to insurance ranks 9 out of 15 strategies listed for scaling climate-smart agriculture (CSA).

### Key policies, strategies, frameworks and plans relevant to index-based crop insurance in Kenya, Tanzania and Uganda

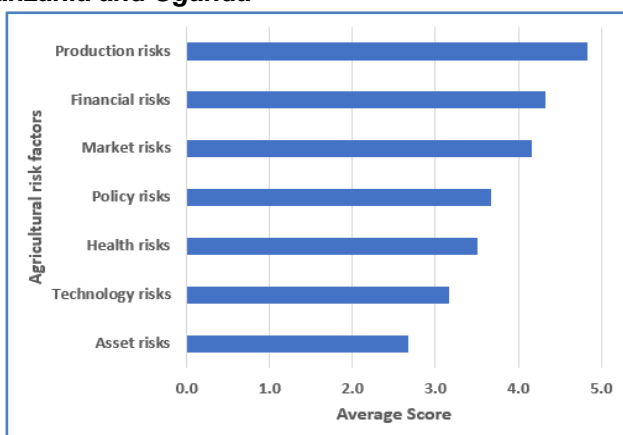


Figure 1. Ranking of various aspects of agro-climatic/weather hazard risks in agriculture from minor (1) to very serious (5).

The insurance market in Kenya is governed by the Insurance Act administered by the Insurance Regulatory Authority (IRA) (Government of Kenya 2017). The authority also provides consumer education, facilitates public-private partnerships, and advises the government on how to improve subsidized schemes. The Kenya Agricultural Insurance Programme (KAIP) is responsible for scaling index-based insurance and was initiated in 2015. Other stakeholders include national and county governments, agricultural insurance companies and Kenya's IRA. Around 880,900 of 8.6 million farmers (10.24%) have been reached since the inception of the project. The program started with maize, pulses and potato.

In Tanzania, the National Insurance Corporation (NIC) has developed a contractual index-based insurance strategy (with three products) to be scaled out in conjunction with the Ministry of Agriculture and Tanzania's IRA (Government of Tanzania 2019). The strategy is in place, but implementation has not started, while rollout has been ready from 2020 (Government of Tanzania 2019). It is expected to start with one district. The main implementer will be the Agricultural Sector Development Programme (ASDP) at the Ministry of Agriculture. Crops to be considered are beans and sunflower.

Using lessons learned from the MUIIS project, the Government of Uganda has embarked on evapotranspiration index-based insurance scaling that has been running since 2016 (World Bank 2019). Product distribution is through financial institutions, aggregators and brokers/agents. The program covers the whole country. The initiative started in 2016 with priority crops being coffee, tea, cotton, maize, beans, rice, bananas, potato, oil crops.

### Gaps: High promise, low uptake

Whereas studies indicate that index-based insurance has a potential to increase agricultural resilience, the uptake is low and the majority of farmers do not perceive it as an important risk management strategy (Figure 2).

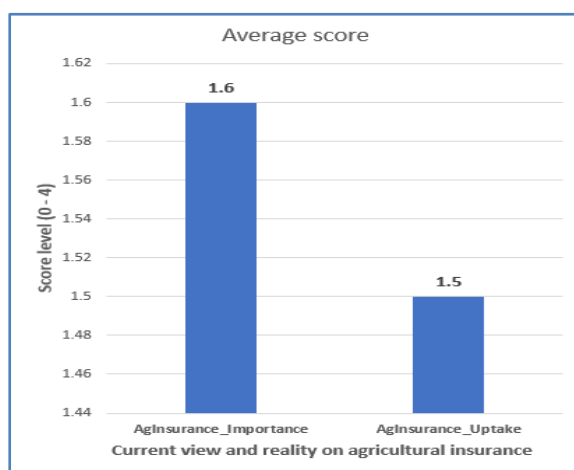


Figure 2. Current ranking of agriculture insurance as a risk management measure, and of the current uptake of agricultural insurance uptake from not a priority (0) to very high priority (4).

Further interrogation reveals that there are more gaps on the demand side (limited awareness of index insurance; mistrust of insurance; limited access to affordable index-based insurance products) than on the supply side (product design). However, very few studies have been done on “demand versus supply” to help design a suitable model for scaling index-based crop insurance, a situation which creates another gap.

As illustrated in Figure 3, other barriers related to the uptake of index-based insurance include limited capacity among the stakeholders, inadequate climatic data and expensive premiums.

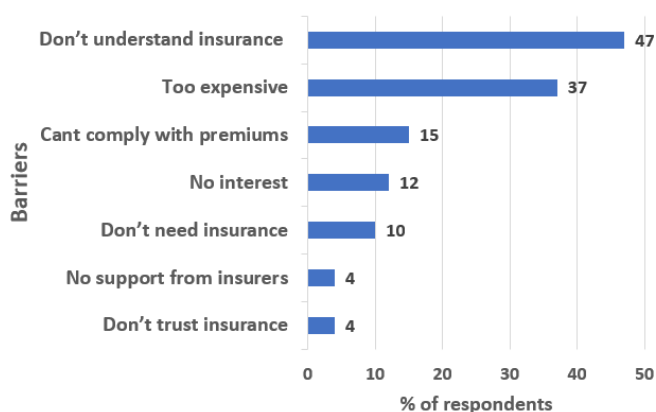


Figure 3. The main barriers to the use of index insurance  
Source: Kariuki 2018 (ACRE Africa)

## Conclusions and recommendations

Despite piloting efforts, insurance uptake is still low in East Africa. Regardless, the findings show that index-based agricultural insurance is gaining increasing attention among stakeholders in the region as a promising tool for adapting smallholder agriculture to climate risk. Some of the recommendations to enhance uptake of index-based insurance include:

- Building local capacity for implementation and coordination: the need for effective coordination between different stakeholders.

### Need for more sensitization and awareness raising

The findings highlight the need to sensitize farmers on index-based insurance. Sensitization can be done through mass communication campaigns and targeted and focused sensitization activities. This process should begin with sensitization of key policymakers, local leaders and value chain actors to enlist their buy-in for awareness campaigns.

### Need for beneficiary-driven insurance product design

To deal with the low adoption of index-based insurance, there is need to explore “bottom-up”, or beneficiary-driven co-design of index-insurance products, with strong public-

private partnerships (PPP) to attract customer interest and trust.

### Need for affordable insurance products

Service delivery and distribution of insurance products that are efficient, effective and affordable among smallholder farmers.

### Need for addressing the issue of market failure in the “climate-credit-insurance” triangle

A model is needed to address the issue of market failure in the “climate-credit-insurance” triangle, a model that increases transparency in the process. The insurance market can fail to work if actors (both insurance companies and farmers) are misinformed about the products, risks and opportunities. Transparency (free distribution and flow of relevant information) can be used to address market failure. Additionally, private and public sector actors should work together to design an agro-climate risk scoring tool, to help insurance companies and lenders assess climate risks before offering insurance and credit respectively. Further, credit can be tied to insurance. Under this scenario, banks purchase index-based insurance to insure their agricultural loan portfolio against risk-induced widespread defaults and pass the benefits and costs onto farmers through contingent-credit loans in which the insurance payouts are expressly used to retire the farmer’s debt.

## Further reading

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