EXPLORING THE FEASIBILITY OF MICRO INSURANCE IN DANCHURCHAID’S PROGRAMS

Spotlight on Zimbabwe, Uganda & Kenya
Crop and Livestock Insurance

A report commissioned by DCA to synopsize a microinsurance feasibility study (2019) and invite partners to support DCA in taking forward agricultural microinsurance programming.

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01: Executive Summary

Microinsurance for crop and livestock protection can offer DCA-supported agropastoralists and the organisation itself a number of benefits and opportunities. This summary report aims to explore some of those opportunities for engagement, with a focus on introducing or expanding microinsurance components in three initial country programs (Uganda, Kenya & Zimbabwe) in 2021.

DCA began a journey of investigation in 2019 to see how crop and livestock microinsurance could protect the lives and livelihoods of those agropastoralists DCA supports across Africa, as they continue to face the increasing severity of climate-induced risks and damages.

Why Microinsurance?

Smallholders and pastoralists around the globe have long dealt with inherent risks to their incomes and livelihoods, finding innovative ways to address systemic agricultural obstacles. However, the impacts of extreme droughts, floods and other weather-related shocks are more severe for agropastoralists who lack the assets, plus access to credit and savings, to smooth the impacts of income losses, food price increases, and local employment and wage volatility during the bad years.

Traditional risk management strategies have proven extremely effective, even in drought prone regions of the world, and they continue to form the bedrock of NGO resilience building and risk mitigation programs. Strategies such as crop and income diversification, borrowing from community savings groups, and seeking off-farm employment are widely used, but they are not without their limitations. For example, community borrowing strategies cannot cope with the covariate nature of catastrophic droughts or floods occurring in one specific area when everyone needs to borrow from the savings pot at the same time. Climate adaptation measures and risk mitigation practices are simply not enough to protect vulnerable communities from extreme weather-related shocks and deteriorating food security, as evidenced by the number of undernourished people in Sub-Saharan Africa. The Food and Agriculture Organization (FAO) of the United Nations reported that food insecurity has increased by 45.6% since 2012.

This is why DCA wants to add another measure of resilience to its support for smallholders and pastoralists using microinsurance, thereby building on extensive programming in disaster risk reduction (DRR) and climate adaptation. By ensuring DCA takes a comprehensive approach to managing risks in this way, any microinsurance component will stand to complement its current expertise in climate-resilient agriculture, financial inclusion and disaster response. Microinsurance therefore has the potential to protect the poorest households in DCA’s programs that are often the most vulnerable to extreme shocks.

References:

2. Walker and Jodha. (1986); Bhattamishra and Barrett. (2010)
3. Hess, U., and P. Hazell. ‘Innovations and Emerging Trends in Agricultural Insurance. How can we transfer natural risks out of rural livelihoods to empower and protect people?’
02: Key Barriers & Opportunities for DCA

What are the key market barriers that DCA is confronted with?

Weather index-based insurance (please see glossary) has provided some positive risk management results for exposure to extreme, less frequent events. However, some key structural challenges to the scaled use of agricultural microinsurance are hampering growth in the sector and will need to be tackled in DCA’s future programmatic interventions. The organisation is well positioned to address some of these challenges already and others will require the support and expertise of DCA’s partners and donors. Some of the barriers that have been explored by DCA are highlighted below.

Historically low take up of microinsurance in developing countries

There is substantial empirical evidence available on the reasons for historically low take-up of microinsurance in developing countries. There are a number of root causes, often interconnected. For example: low financial literacy rates; high basis risk (please see glossary) causing farmers to perceive low value in their insurance product; limited protection from single-hazard coverage versus farmers’ multi-hazard reality; high-intensity delivery and servicing requirements, therefore higher costs; lack of funding for subsidies to pay insurance premium payments; and liquidity constraints of cash poor farmers to pay upfront for insurance premiums\(^5\). DCA is aware that many of these inherent challenges need to be addressed simultaneously, alongside its partners, in future pilots.

Bundling insurance with financial and non-financial services is a potential solution to low uptake (either by bundling across risk classes eg. life insurance with weather index insurance, or by bundling insurance with other value-added services like credit or inputs). Some research shows that the perceived value of the insurance product is increased, when offered to potential customers in this way. Bundling insurance with credit can be a means to ease liquidity constraints for farmers, plus decrease the risk of default for credit providers. This approach has been partially trialed in DCA Uganda, which is discussed in more detail in a subsequent section of this report. However, the downside with bundling can be a lack of transparency for the farmer where there is insufficient information provided to agropastoralists about the terms and purpose of the insurance they are purchasing\(^6\). In some cases, there may be a complete lack of awareness on the part of farmers that they have even purchased this type of insurance. In other cases, evidence shows that individuals also opt out of loans to avoid unwanted bundled insurance\(^7\). Specific insurance and general financial literacy trainings are therefore vital in any pilot model.

Low insurance awareness or literacy

The risk of farmers misunderstanding the product they are being offered is high due to the complexities of product design, risk modelling and payout structures, in addition to historical gaps in direct communication and distribution channels between insurance companies and agropastoralist communities. Insufficient understanding of how and when an index insurance product may pay out can lead to a perception of loss by farmers and a build-up of distrust. The upfront and ongoing costs of an education program that adequately educates and empowers people can be prohibitive in any microinsurance business model, hence the likelihood of a potential funding gap for education and training is high.

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6. Action on Climate Today. ACT on Knowledge, No. 4: Disaster microinsurance. Action on Climate Today programme. New Delhi, 2016
DCA can build on pre-existing NGO community connections

The responsibility for education and awareness should lie with the insurance companies themselves, but many also acknowledge they need help from NGOs to reach out to and mobilise smallholders and pastoralists. DCA's long-standing and trusted connections with farming and herding communities is a strength the organisation brings to any insurance partnership. Building on its expertise in agricultural extension and technology programs, DCA is well positioned to ensure equitable access to information and training for the most at-risk agropastoralist communities, plus the empowerment of people through an education program. DCA also represents a dependable intermediary that can communicate on behalf of farmers and herders with insurance companies.

Technical design challenges

Agricultural microinsurance products need to be made less complex, more context specific and lower cost to encourage greater trust and broader uptake by smallholders and agropastoralists. The high costs of tailored insurance products (per location, crop and livestock type) need to be offset by creating enough scale to generate a viable business opportunity for insurance companies and low enough pricing to be affordable to smallholders and pastoralists. The technical design phase of a microinsurance pilot is therefore critical. A number of design components for DCA and its partners to focus on are discussed below.

1. Basis risk

There is less occurrence of basis risk and it can also be less expensive when weather-based index insurance products are designed to cover less frequent but more extreme climate shocks (for example a 1 in 50-year drought). Yet, to build trust in a microinsurance product, farmers and pastoralists need to see rapid pay outs early on, which in turn can motivate stakeholders to design insurance products that cover high probability/low loss events, such as a 1 in 3-year drought.

There is an array of mitigating options to minimise basis risk, which DCA, along with its agropastoralists and its partner organisations in Zimbabwe, Kenya and Uganda, can explore further. These include advances in remote weather monitoring (more granular resolution of satellite imagery and locally specific data sets), the use of area yield insurance (please see glossary) that combines satellite imagery with farm level yield data and sample crop cuts, comprehensive consideration of all vulnerabilities and exposures of agropastoralists, and using funds held within community savings and loans groups to cover basis risk and/or fund those more frequent but less severe shocks that can be unsuitable for insurance cover.

2. Subsidies and sustainability

The most impactful use of subsidies in a microinsurance business model remains a key area for further exploration. The question of whether donors should subsidise premium payments on behalf of farmers over multiple years, or the high initial investment costs for national insurers to research and develop a new insurance index, or the training and education of farming communities, or act as a stop-loss reinsurer (please see glossary) for catastrophic events continues. If the program is designed to specifically target the poorest and most vulnerable farmers, it is highly unlikely that they will be able to pay their own premiums. Hence, donor premium subsidies are vital, certainly in the early phases of the microinsurance program.
Whether it is a donor or a farmer paying for microinsurance, value for money and facilitating access to affordable insurance is a key role for DCA in a microinsurance initiative. There are innovative ways of reducing costs in insurance models, including the use of blockchain, mobile money, and digital platforms. These technologies can increase efficiencies in the risk profiling of smallholders and in data processing and transfer.

3. Cultural challenges
Cultural barriers to planning ahead and investing in the future can be deep-rooted within the smallholder and pastoralist communities DCA supports. Crop and livestock insurance is the introduction of a new strategy for most agropastoralists and lack of experience can create a negative perspective at first. DCA’s past experience suggests that farmers may perceive a clear choice between paying for insurance to protect against failed harvests or investing their time in more labour-intensive climate-smart agricultural practices. It is therefore very important to DCA to ensure direct conditionality between the fulfilment of resilience building activities in rural communities and eligibility for crop and livestock insurance coverage. This direct linkage between risk reduction programming and microinsurance has precedent in the World Food Program’s (WFP) R4 Rural Resilience Initiative.

Programmatic challenges
Commercial versus indigenous approaches
It is a programmatic priority for DCA to advocate for low external inputs (often in the form of commercial seed and fertiliser supply) and the use of indigenous methods, including the use of indigenous seed varieties. This may pose a challenge for DCA when considering the use of bundling microinsurance directly with input supply. Whether or not such inputs are deemed climate-smart by DCA is a consideration in insurance design.

In addition, farmer involvement in informal risk sharing schemes, such as Village Savings and Loans Associations (VSLAs), may be affected by the presence of insurance. If an insurance product is designed in such a way that it covers the more frequent, lower impact events that farmers face on a regular basis, this could potentially de-value the savings group activities, which were put in place to lessen the impact of everyday risks for smallholder and pastoralist communities. If savings group members give up savings in favour of paying for insurance, and the insurance does not pay out, farmers are inadvertently left with uncovered risks that perpetuate their vulnerability and can generate distrust in insurance.

Linkage between risk reduction activities and insurance premium pricing
With indemnity insurance, a clear risk reduction action directly impacts risk exposure and thereby lowers the premium paid by the insured person. With agricultural and pastoral microinsurance, there are very few programs where such direct linkage between risk reduction and premiums exists. The closest product design comes to this is to ensure that risk reduction program components are optimised, so that payouts to farmers could be reduced over time, as those farmers become more resilient. In other words, product design needs to be actively modified to take account of the increased resilience of farmers over time and differing projections of the rate of climate adaptation by smallholder and agropastoralist communities. There is also a risk of unintentionally creating inequity when

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designing insurance products if the design phase is not truly farmer-centric. For example, the poorest farmers may be unable to complete the conservation activities that make them eligible to reduce their payable premiums.

**Microinsurance is not a panacea**

Robustly designed microinsurance has the potential to reduce extreme climate exposure and negative coping strategies for poor farmers and pastoralists when disasters happen. Livelihoods can be strengthened, productivity of the agricultural sector can be increased, economic advancement can be supported and poverty can be reduced. The use of pro-poor microinsurance, as part of a comprehensive risk management framework (also including risk retention, mitigation, and adaptation), can enhance community level perception of risk. When adequately monitored and evaluated in conjunction with other risk management programs, it has also the potential to contribute to building resilience to climate change.

Maintaining a farmer-centered approach to microinsurance and in-depth community research at the design phase are critical to truly understand what agropastoralist risks are or what really matters to an agropastoralist in an emergency situation. For example, farmers may want an insurance solution that protects their harvest incomes, not just the various stages of harvest (germination, flowering etc). Revenue insurance covers not only yield loss due to weather or pests, but also market price fluctuations that cause a loss if income for the farmer. However, it is also very difficult to price this type of insurance. DCA could further explore other measures to support farmers to manage this risk. For example, guaranteed off-taker contracts or warehouse storage contracts.

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Some of these challenges are being addressed in DanChurchAid Uganda’s innovative livelihoods program.

- DCA is working together with a multi-stakeholder coalition of partners to bring together specialist skills and expertise in agronomy research, digital information services, farmer cooperatives, weather index insurance and fintech to find new and impactful solutions for farmers and herders to protect their livelihoods and build resilience to extreme climate risks.

- They are focusing on affordability through the prospective provision of subsidies for agropastoralists to address the cultural challenges presented by a lack of familiarity with index insurance and its potential to create a trusted guarantee for farmers and herders when climate-related disasters happen.

- Investing in knowledge and training is key for this consortium. Providing specific opportunities for agropastoralists to engage, learn and question insurance concepts, processes and technicalities throughout the year is a priority.

- By exploring the bundling of weather index insurance with other services that are high priority for farmers and herders, such as agricultural inputs or credit services, DCA Uganda is exploring how to make weather insurance accessible and truly useful for agropastoralists.
03: Feasibility Spotlight on Zimbabwe

Where is DCA on its microinsurance journey?

DCA in Zimbabwe is leading the Sizimele consortium of organisations as part of the Zimbabwe Resilience Building Fund until June, 2022. Many components of this project align closely with index-based insurance. For example, early warnings and actions taken based on community-based risk assessments and feedback mechanisms, cash for asset creation, and the use of crisis modifiers that release ring fenced contingency funding to respond to emergencies experienced during the life of a multi-year development program.

Many smallholders involved in DCA’s programs have life insurance coverage and spoke well of this insurance when interviewed. One village community also has asset cover for their bulls and goats. Smallholders are clear on their appetite to pay for crop or livestock insurance themselves, the types of payouts they would like to receive (cash or in-kind), and most of all their need for timely and affordable coverage that meets their specific needs.

Awareness levels of the objectives and functions of insurance generally (not necessarily index-based insurance) is therefore high amongst these DCA supported smallholders. In addition, DCA is well placed to integrate an insurance component into pre-existing climate resilience, community-led disaster risk management, climate-smart agriculture and financial inclusion programming, in particular due to strong risk reduction and adaptation elements already existing in these programs.

The macroeconomic environment in Zimbabwe, along with the impact of covid-19, creates complexities in piloting microinsurance, which already has a complicated history in the country. A large number of failed pilots, a capacity gap at the government level to provide widescale subsidies, and historical problems with consumer rights protection has fostered high levels of distrust of microinsurance by smallholders.

Opportunities for partnership

DCA is therefore seeking technical partners and donors with deep experience of the context-specific barriers to operating microinsurance programs in Zimbabwe. In particular, regard for the significance and cost of capacity building of both stakeholders and smallholders, the value of farmer-centric design, the opportunities presented by bundling microinsurance with other reliable and trusted agricultural services, and the critical nature of clear roles and responsibilities in order to enable an effective pilot program. Funding would enable the launch of a pilot microinsurance project, including the recruitment of a project-specific technical resource in Zimbabwe.

04. Feasibility Spotlight on Uganda

Where is DCA on its microinsurance journey?

DCA has been working with smallholders in the sunflower value chain for 3 years on climate-smart agricultural practices, market linkages and private sector extension services. Recent funding from DCAs Fund for Innovation allowed DCA to pilot the
provision of digital agronomic advisory services, including weather forecasting, crop advisory service and weather index insurance, through partnership with Fintech Ensibuuko\(^\text{11}\). As an insurance agent for the Public Private Partnership between the Government of Uganda and the insurance industry\(^\text{12}\), Ensibuuko offered farmers subsidised crop insurance that cost under $9 per season per acre (50% of the premium payment paid by the government of Uganda) via a digital financial services platform.

The insurance offer was not the main focus of this innovation project, however it was trialled towards the end of the 1-year pilot period, without additional funding, as an optional awareness raising and training opportunity for farmers. A small number of farmers did sign up to the insurance using their own funds, however there was not the time nor sufficient uptake by farmers for this supplementary program component to be meaningfully tested and evaluated in 2019.

**Opportunities for partnership**

DCA Uganda is seeking funding for a multi-year crop insurance pilot that would: supplement a digital agronomy service and broader financial inclusion program; subsidise farmers’ premium payments for a minimum of 3-4 seasons; invest in insurance knowledge and comprehensive training for farmers throughout the year; and enable the experimentation of bundling options eg. bundling microinsurance with monthly VSLA savings contributions, inputs, credit, agronomy services or other added value services to smallholders. DCA Uganda is actively exploring, with its private sector partners, how to make agricultural insurance more affordable, sustainable and accessible for agropastoralists, thereby addressing some key market barriers to growth.

### 05: Feasibility Spotlight on Kenya

**Where is DCA on its microinsurance journey?**

DCA Kenya maintains an innovation focus in its programming, allowing the organisation to take an agile approach to new opportunities in one of its key programmatic areas – sustainable livelihoods. Households are supported through a number of program components including inclusive access to finance, agricultural extension across multiple value chains and digital agri-tech platforms for weather information and agricultural advisory services, plus credit risk assessment. DCA Kenya also recently commissioned a consultant and insurance professional to complete a feasibility study in order to identify some of the key opportunities for engagement in the microinsurance sector generally, including agricultural microinsurance.

**Opportunities for partnership**

The next steps are to explore further, based on this feasibility study, the level of demand for crop and livestock insurance amongst households in the context of the specific risks they are facing, and identify an intervention point in an advanced and unconsolidated insurance sector in Kenya. In particular, DCA Kenya is seeking technical partners to help pinpoint ways to leverage the organisation’s pre-existing deep community connections, capacity for mobilization of farmers around access to finance, and focus on innovation. Private sector partners that can work with DCA Kenya to navigate the complex insurance market and design a microinsurance
solution that builds farmer resilience and addresses key barriers to growth will be essential. Likewise, donors that are motivated to pilot new solutions via multi-year premium support will be a critical part of this endeavour.

06: The Journey Ahead

Given the deep complexities of agropastoralist ecosystems and the inherent barriers to widespread microinsurance roll out, DCA will seek in its future pilots to:

● ensure a farmer-centric and needs driven approach is taken towards program and product design, rather than a financial instruments-focused starting point;
● foster sustainability through active participation of beneficiary smallholders in all phases of this innovation process from concept, to product design, to implementation, to monitoring and evaluating, which enables trust and transparency;
● create affordability and accessibility through pragmatic usage of donor subsidies;
● take an ecosystem approach by engaging with a wider set of stakeholders that can influence and advocate for this innovation;
● ensure clarity of roles amongst stakeholders, with particular focus on DCA’s value proposition in the microinsurance ecosystem, including facilitating communication and capacity;
● ensure a comprehensive approach to risk management, even when focusing on the integration of microinsurance in the specific country contexts of Zimbabwe, Uganda and Kenya;
● create a strong learning component at the country level in order to embed learning and refine DCA insurance programming over time.

All this, with a view to exiting a role as facilitator and enabler once the aforementioned conditions have been accomplished.
07: **Glossary**

**Area Yield index insurance**

"Payouts are based on the realised average yield of an area such as a county, a district or even a village, not the actual yield of the insured farmer. The insured yield is established as a percentage of the historical average yield for the area. A payout is triggered if the realised yield for the area is less than the insured yield regardless of the actual yield on the insured’s farm."


**Basis risk**

"Basis risk is the difference between an index and the shock that the index is supposed to be a proxy for. A payout triggered by an index may be higher or lower than the beneficiary’s losses, leading to overpayment or shortfall respectively. Where there are differences of opinion amongst stakeholders over what the index is supposed to be a proxy for, the precise definition of basis risk can be contested. For example, disagreement may arise over whether an agricultural insurance product that uses a rainfall-based index covers drought-induced crop disease and pest damage."

*The Centre for Disaster Protection Glossary of Terms*: [https://www.disasterprotection.org/glossary](https://www.disasterprotection.org/glossary)

**Climate-smart agriculture**

"Climate-Smart Agriculture (CSA) is an approach to help the people who manage agricultural systems respond effectively to climate change......[it has three] objectives: sustainably increasing productivity and incomes, adapting to climate change and reducing greenhouse gas emissions where possible."


**Indemnity insurance**

A (re)insurance contract which pays out compensation worth the ultimate net loss of a specific asset. This type of insurance can be useful in protecting high-value assets such as homes, where there is a relatively narrow scope of potential loss. Insurance payouts are determined based on an assessment of losses after an event has occurred.

*The Centre for Disaster Protection Glossary of Terms*: [https://www.disasterprotection.org/glossary](https://www.disasterprotection.org/glossary)

(original source: InsuResilience Global Partnership, 2020)

**Microinsurance**

"Microinsurance is about developing and distributing insurance products that provide protection for low-income people against specific perils. Insured people are expected to pay premiums, which are market-based and proportional to the likelihood and cost of the relevant risk. One of the key aspects that differentiates microinsurance from traditional insurance is that it targets people who have limited or no access to traditional financial services as well as other means to effectively cope with the financial consequences of risk."

“A type of insurance based on a proxy for losses, such as measured rainfall or the measured health of vegetation. Index-based insurance compensates farmers based on changes in a pre-determined index correlated with agricultural yield (or harvest), rather than on-site assessments of actual damage incurred to crops due to insured risks. Insurance payouts are distributed to all insured farmers within a specific geographic area if the index falls beyond a pre-determined threshold i.e. rainfall recorded over a certain period is below the value set in the index for drought coverage.”


“Insurance is a well-known form of risk transfer, where coverage of a risk is obtained from an insurer in exchange for ongoing premiums paid to the insurer. Risk transfer can occur informally within family and community networks where there are reciprocal expectations of mutual aid by means of gifts or credit, as well as formally, wherein governments, insurers, multilateral banks and other large risk-bearing entities establish mechanisms to help cope with losses in major events. Such mechanisms include insurance and reinsurance contracts, catastrophe bonds, contingent credit facilities and reserve funds, where the costs are covered by premiums, investor contributions, interest rates and past savings, respectively.”

*UNDRR Terminology Glossary:* [https://www.undrr.org/terminology/risk-transfer](https://www.undrr.org/terminology/risk-transfer)

“Stop-loss reinsurance is a type of excess of loss reinsurance wherein the reinsurer is liable for the insured's losses incurred over a certain period (usually a year) that exceed a specified amount or percentage of some business measure, such as earned premiums written, up to the policy limit.”


“[Weather] Index insurance is a relatively new but innovative approach to insurance provision that pays out benefits on the basis of a predetermined index (e.g. rainfall level) for loss of assets and investments, primarily working capital, resulting from weather and catastrophic events. Because index insurance does not necessarily require the traditional services of insurance claims assessors, it allows for the claims settlement processes to be quicker and more objective. Before the start of the insurance period, a statistical index is developed. The index measures deviations from the normal level of parameters such as rainfall, temperature, earthquake magnitude, wind speed, crop yield, or livestock mortality rates.”

*IFC Index Insurance Frequently Asked Questions:* [https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/access_essential+financial+services/giff+frequently-asked-questions#:~:text=Index%20insurance%20is%20a%20relatively,from%20weather%20and%20catastrophic%20events.](https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/access_essential+financial+services/giff+frequently-asked-questions#:~:text=Index%20insurance%20is%20a%20relatively,from%20weather%20and%20catastrophic%20events.)