Inclusive insurance for a sustainable future
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Foreword

By Katharine Pulvermacher

Welcome to the 2018 edition of The State of Microinsurance.

There are just 12 years remaining to achieve the UN Sustainable Development Goals (SDGs), and urgent action is needed if no-one is to be left behind. This report, and future editions, will focus on providing concrete examples of how inclusive insurance is contributing to the broad development agenda in a structured way that links directly to selected SDGs. It builds on work published by Microinsurance Network (MiN) members in the 2017 report *Inclusive Insurance and the Sustainable Development Goals*, and responds to the need to demonstrate how practice supports theory. Around the world, MiN members are already playing a leading role in providing innovative, affordable insurance products.

In producing this year’s *The State of Microinsurance*, we introduced a new editorial process. Calls for papers were opened to the public for the first time to broaden the pool of contributions. We also benefited from the insight and support of an Editorial Board, made up of nine experts in the field of inclusive insurance and development impact, representing universities, think tanks, implementing agencies, impact investors and donors.

The Editorial Board reviewed every proposal submitted using a systematic, objective methodology, with the goal of assuring a fair process that we hope will continue to contribute to improving the quality of the publication. As a result, we believe the articles provide a wide-ranging review of current trends in inclusive insurance, as well as making a significant contribution to important debates on future developments.

We also very much hope that, over time, grant funding will be made available to researchers working in this area. Our goal is to develop the body of knowledge around best practices and to share this. We want to ensure that the insurance products and services provided to economically vulnerable people around the world deliver good value. We also want to provide robust evidence that these products and services truly work for the consumers that use them, and really do build resilience.

Measuring impact – or even simply evaluating outcomes – is complex. Insurance does not exist in a vacuum, and it is just one of many contributing factors in the struggle for sustainable development. However, we believe that insurance is a critical factor for success, and we hope that the case studies presented in the pages that follow will generate healthy debate and spark new ideas.

I wish you a stimulating read!
Quality standards for agricultural index insurance: an agenda for action

Agricultural index insurance can accelerate progress towards the Sustainable Development Goals (SDGs) and the ending of poverty worldwide, say Michael R. Carter and Tara Chiu.

Impact evaluations have demonstrated that index insurance can increase farmer investment by 20-30% while protecting farmers against the worst consequences of adverse weather events, such as selling assets, reducing consumption and relying on foreign aid. Index insurance can accelerate economic growth, increase resilience and prevent the intergenerational transfer of poverty.

However, investments in agricultural index insurance often focus more on increasing access and availability than on ensuring quality and value. Too often, donors and practitioners overlook the fact that these exciting potential impacts rely on high-quality insurance.

Increased attention to contract quality and value to farmers is needed for agricultural index insurance to contribute to the SDGs.

A minimum quality standard for agricultural index insurance

When index insurance contracts fail, farmers may be left worse off than they would have been without insurance. They will have lost both crop and insurance premiums, as well as defaulting on any loans taken out with the confidence the insurance gave them. Contracts that fail too often and at the wrong times can make farmers worse off, which is why the Feed the Future Innovation Lab for Assets and Market Access (AMA Innovation Lab) has developed a Minimum Quality Standard (MQS) measure and a spreadsheet tool to implement it.

Insurance can make a farmer better off by transferring money from good years to bad, but when an index contract fails to pay in a bad year, its value to the farmer diminishes. Two things should reduce the measure of index insurance quality: frequency of failure and the value of money when the contract fails. The MQS measure does precisely this.

Figure 1 illustrates the MQS standard for the hypothetical case of a farmer facing a severe drought once every five years, which reduces farm income from US$1,000 to US$250. Using the standard economic tool of expected utility theory, we can calculate the risk-discounted expected level of well-being the farmer could anticipate. Under these assumptions, the risk-discounted expected well-being of the farmer is US$725, resulting in little difference between running the farming operation (which has an average income of US$850) and receiving a guaranteed income of US$725, irrespective of the weather.

Thus the farmer would be better off with insurance if the risk-discounted expected well-being is higher than US$725. The downward sloping line in Figure 1 shows this measure of well-being as the risk of contract failure. If the contract never fails, the farmer’s level of well-being would be almost US$800, well above the level without insurance. This ‘no failure’ insurance contract easily passes the MQS as the farmer is better off with insurance than without. This holds true even though our calculations assume a 50% mark-up on the insurance premium.

On the other hand, as the failure probability increases, the farmer’s risk-discounted well-being with insurance declines. If a contract has a failure rate higher than 50%, the farmer would be better off without the insurance. At these higher failure rates, a contract does not pass the MQS. Given that simple rainfall contracts often have failure rates of 50% or more, this is a very real possibility.

Price also matters. The downward sloping orange line in Figure 1 examines this hypothetical situation for a contract with a higher mark-up. At that higher mark-up rate, the contract does not pass the MQS once the contract failure rate exceeds 15%.
**Figure 1:** Minimum Quality Standards, Stylised Case

![Graph showing risk-discounted expected level of economic well-being vs. probability contract failure (% of loss events).](image1)

**Figure 2:** Minimum Quality Standard: Rice Farmers in Tanzania

![Graph showing risk-discounted expected level of economic well-being vs. premium, US$ / Hectare.](image2)
The same economics apply even if the contract is subsidised. A contract that fails the MQS means the farmer is better off keeping the premium rather than having a worthless insurance contract. Even if the insurance is fully subsidised, the farmer would gain economically by receiving the premium as a simple cash transfer rather than having an unreliable contract. Ultimately, measurement of quality is not dependent on who pays for the insurance.

**Implementing the MQS in practice**

The use of MQS in practice can be illustrated by using an index insurance contract design analysis undertaken in a rice-growing region of north-eastern Tanzania. With a budget of approximately US$10,000, we collected retrospective rice yield data from 600 randomly sampled farmers in the region. After estimating the underlying probability distribution drivers of rice yield, we were able to calculate the expected level of risk-discounted well-being for a typical risk averse farmer with a one-hectare rice plot. The solid horizontal line in Figure 2 shows the economic well-being value for this farmer is just over US$1,225. Expected income for the farmer (with no risk discounting) is about US$1,400.

We can then calculate the same well-being measure for a series of possible contracts: an area yield contract; a satellite-based predicted area yield contract; and that same satellite-based contract backed up with a ‘fail-safe’ audit. Each of the curves reflects the actual failure that would occur if these contracts were actually implemented.

The downward sloping, blue dashed line shows the risk-discounted well-being for the farmer as the price of the contract increases. The actuariually fair price (or pure premium) of this area yield contract is US$67 per hectare. At this price, the contract easily passes the MQS, but does not account for the cost of the annual yield surveys or other administration costs. Including the cost of yield surveys alone pushes the cost of the insurance to about US$87 per hectare. While the area yield still passes the MQS at this premium level, there is little room for further mark-ups before the contract fails to pass the MQS.

**Designing contracts to meet the MQS**

The problem with the area yield contract is the cost of implementing it in an environment where there is no existing yield data provided by the public or private sector. Figure 2 illustrates two alternative contracts that were analysed in order to try and strengthen the MQS for Tanzanian rice farmers.

The first is a pure satellite-based index that estimates yields using a measure of gross primary production. While less accurate than an area yield contract (hence the dark brown dashed line lying below the line for the area yield index), the satellite-only contract has a base price of only US$50 per hectare, which allows for a US$10 (or 20%) mark-up before the contract fails the MQS.

A hybrid contract which backs up the satellite yield predictor with an ‘on-demand’ fail-safe audit mechanism performs even better. The fail-safe audit provision (which has been tested with maize contracts in Tanzania and Mozambique) allows farmers to call for a yield survey or crop cut in those years when the satellite-based yield index fails to accurately record average losses.

The orange dashed line in Figure 2 shows the risk-discounted expected level of well-being under this hybrid contract. It is almost as high as the area yield but it can be implemented at only a fraction of the cost, as yield surveys would be needed only 4% of the time (as opposed to 100% of the time for the area yield contract). The dashed green vertical line in Figure 2 shows the pure premium for this hybrid contract adjusted upwards for the cost of these occasional audits. There is ample space for further contract mark-ups before failing the MQS. Further analysis suggests this contract will be in greater demand than either the area yield or satellite-only contracts.

This is just one practical example of how contracts designed using MQS can help farmers. Remote sensing technology is advancing rapidly, and with it, so is our ability to predict yields accurately using higher resolution imagery from drones and even smartphones, for example.

**Agenda for action**

MQS is only the first step towards consistently high-quality, sustainable agricultural index insurance. The AMA Innovation Lab proposes a regional certification board of technical specialists, drawn from public and private sectors. They would then conduct objective tests for levels of quality that meet government or donor regulatory requirements, and issue a Quality Index Insurance Certification (QUIIC) to those products that pass the test. This approach has the potential to revolutionise product safety assessment and communication.

For farmers and rural households at risk of catastrophic losses, MQS certified index insurance would ensure a degree of transparency for complicated products. Structured certification could also help prevent substandard products from entering the market and driving out high-quality insurance. This would help insurance fulfil its potential to end poverty for smallholder farmers across the world.

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1. A combination of the Enhanced Vegetation Index, the Leafy Area Index and the Fraction of Photosynthetically Active Radiation – all measures available from the NASA Modus satelites at 250m x 250m resolution.
Food insecurity can be defined as "the lack of secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life". Food security requires three stable conditions: availability, access and use. In other words, food must be regularly available in sufficient quantities and diversity, and have a positive nutritional impact.

Conflict and extreme weather events are major drivers of hunger. In eastern and southern Africa, prolonged drought has played a significant role in consecutive poor harvests and has exacerbated already high levels of food insecurity. The World Food Programme (WFP) aims to achieve Sustainable Development Goal 2 (SDG2) of zero hunger by collaborating with partners to test and scale up innovative ways of providing rapid assistance to the poorest and most vulnerable farmers after a shock, helping them to become more climate resilient and food-secure.

Index insurance is one such innovation. It allows quick payouts to farmers if the index falls below a pre-determined threshold, thus supporting protective and transformative progress towards SDG2. Index insurance is considered a powerful tool for smallholders to help them manage climate risks and achieve resilient livelihoods, while also enabling investments and growth in the agricultural sector. Insurance can achieve greater impact by addressing and reducing the risks to which farmers are exposed, and providing support for investing in more productive activities. It can also help overcome the underlying vulnerabilities that hinder farmers’ resilience and food security. However, given the complexity and costs of insurance, it is essential to combine it with other complementary services in an integrated risk management approach.

Insurance as a protective and transformative tool

During bad years, farmers have to sell productive assets, resulting in long-term negative impacts on their food security. Payouts can help farmers to cover their immediate food needs while protecting their livelihoods, assets and investments. For example, area yield index insurance payouts triggered in Kenya through the R4 Rural Resilience Initiative helped farmers to access food during the lean season. As Figure 1 shows, one month after a payout to 963 farmers, a survey of 124 recipients found that 85% of households bought food, 39% bought livestock, 29% bought agricultural inputs and 31% used the funds to pay school fees. The payout helped mitigate against food insecurity after a failed agricultural season and reduced the erosion of livelihoods through the purchase of productive assets.

Besides acting as a social protection mechanism, insurance can also play a long-term transformative role that helps to lift people out of poverty. As one R4 participant in Malawi said, “This year, I engaged in farming with a very positive mind knowing that if my crops failed because of drought, I would be supported by insurance compensation and not be desperate to find food”. By reducing uncertainty, insurance encourages farmers to invest in planting crops in more fields, or buying assets such as fertilisers, seeds or new agricultural technologies that can increase their productivity in non-payout years. At the same time, insurance facilitates access to financial services including credit, which support productive investments and can help to achieve sustainable livelihoods. In Ethiopia, R4 insured farmers have increased their saving and borrowing, as well as diversifying their income sources away from cereal crops.
Insurance in an integrated approach

WFP’s integrated approach in Malawi is aimed at food-insecure smallholder farmers who live in shock-prone areas and who cannot purchase insurance. The insurance product is built into national productive safety nets so that farmers can access weather insurance by investing their time in building assets that reduce their vulnerability over time. From the second year, farmers start paying part of the premium in cash. Over the long term, thanks to the combination of services offered to them, they will be able to transition from the safety net programme into the commercial market for financial services.

WFP has been working in Malawi since 2015 under the R4 Initiative to build farmers’ resilience against climate shocks and to improve food and income security by integrating asset creation, weather index insurance, financial and climate services. Together, these tools help farmers face climate shocks and protect them by reducing the risk and transferring part of it to the financial market. At the same time, farmers are supported in building up savings, taking calculated risks to diversify their livelihoods and accessing microcredit. This in turn helps to address the country’s structural challenges such as poor access to inputs, assets and financial services. Participation by highly food-insecure smallholders who are dependent on rain-fed agriculture in shock-prone areas has increased significantly from 500 to more than 10,000 farmers. Of these, 7,000 received payouts totalling around US$400,000 following dry spells.

Despite erratic weather over the last three years affecting the already vulnerable population, preliminary findings of the programme monitoring system demonstrate that the integrated approach has improved food and income security and brought about positive changes for participants. This analysis is based on panel data obtained from regular quantitative surveys conducted in May 2015 and 2017 and qualitative surveys of over 134 participating households in Balaka District. This allows comparison of the effects of the interventions over time and on the same groups. The evolution of participants was compared with a randomly selected control group of 92 households not participating in the integrated approach, allowing direct attribution of the effects to the intervention.

Results are encouraging. Figure 2 shows how the participants’ food consumption score (FCS) has increased since 2015. The number of households with a poor to borderline FCS decreased from 41% to 11%. R4 participants showed an improvement in their food security status that was higher than non-participating households. Overall dietary diversity improved: households with low dietary diversity halved and households with medium dietary diversity increased by 35% from the baseline.

These positive trends are mirrored by a reduction in negative consumption coping strategies. Participants are now better able to meet their needs without having to resort to extreme measures such as relying on less nutritious, cheaper food or reducing the number of meals they eat each day. Farmers also grew more
diversified crops during the 2016/17 agricultural season. Increased or stable productive assets owned by households is a sign of improved resilience. Households also reduced the amount they spent on food – a good indication of declining vulnerability levels – freeing up half their income to invest in family well-being.

With increased food security, farmers can focus on increasing their productivity and investment capacity through savings groups, access to credit and climate services. Indeed, participants are saving more – 47% more through savings groups or associations and 7% more through informal saving methods. They also doubled their access to credit compared to 2015, mostly for health expenses (32%), food consumption (21%) and income-generating activities (18%).

These encouraging results show that microinsurance can help to achieve zero hunger when used alongside other tools that reinforce each other in an integrated approach to help manage risks. WFP is also exploring integration with market access support, which would provide further incentives for production, ensure the sustainability of investments and allow farmers to become more competitive in the commercial market.


Figure 2: Food consumption score

Figure 3: Dietary diversity score

Figure 4: Food and non-food expenditure


9. The R4 Rural Resilience Initiative (R4) is a strategic partnership between WFP and Oxfam America launched in 2011 to manage climate risks through: natural resource management, microinsurance, savings, livelihood diversification and microcredit. It reaches over 57,000 farmers in Ethiopia, Senegal, Malawi, Zambia, Kenya and Zimbabwe. For more information, see WFP website: http://www1.wfp.org/r4-rural-resilience-initiative.


16. FCS is a proxy indicator of household food security based on the weighted frequency (number of days/weeks) of intake of eight different food groups. FCS captures both elements of food security: quality (different food groups/dietary diversity) and quantity (food frequency).

17. The Dietary Diversity Score indicator estimates the quality of diet by measuring the number of different food groups consumed over a given period.

More than half of Egypt’s population has access to government health insurance, yet 72% of total health expenses are out-of-pocket. This gap opens up an opportunity to develop alternative health financing mechanisms for Egyptians living on a low income, meeting this opportunity is crucial to achieving Sustainable Development Goal (SDG) 3: promoting well-being and ensuring all people of all ages have healthy lives.

Lead Foundation, an Egyptian microfinance institution, partnered with Women’s World Banking – a global leader in women’s financial inclusion – to introduce an insurance scheme for its clients in December 2015. Our research showed a need for insurance to compensate for loss of income if a household’s breadwinner was hospitalised or died. This led us to develop the ‘Hemayet Lead’ (‘Protection by Lead’) hospitalisation and life insurance programme.

Hospital cash insurance provides US$17 (EGP 300) for each night in hospital for any condition, including maternity and pre-existing conditions. To claim, the insured person simply submits a discharge certificate to Lead as proof of hospitalisation. Life insurance pays out three times the amount borrowed, less any outstanding loan, to the family of the deceased client.

Successful microinsurance

Successful microinsurance programmes are those that are actually used. If clients do not use their insurance, it delivers no value to them. Low usage could stem from a lack of awareness, perceptions of the limited value of the benefits or generally negative views of insurance (“it doesn’t work for us”). Collecting client feedback is important for gaining a better understanding of the underlying causes. On the other hand, usage of a particular insurance programme can be measured by the claims frequency – that is, the proportion of the total insured population filing claims over a given period of time. Phone surveys are particularly useful for collecting statistically representative client feedback. Three phone surveys conducted over 18 months have provided us with valuable insights to ensure Hermavat Lead’s success.

Claims frequency and client awareness

A three-month post-pilot evaluation in March 2016 revealed that the actual frequency of claims was lower than initial actuarial assumptions and that it varied across Lead’s three branches. In addition, research by Women’s World Banking and Lead Foundation showed that clients’ understanding of the insurance features was limited and that they did not trust the product to work for them. However, those who had benefited from claims were satisfied with the process and the sums paid out.

These findings suggested that low awareness may result in low claims frequency. To test this hypothesis, Women’s World Banking conducted a phone survey with six groups, speaking to both group loan clients and individual clients away from the three pilot branches. A total of 635 clients took part in the phone survey. This revealed that, while the majority of respondents knew they had insurance (only 12% were not at all aware of having any), most could not mention more than three features of the product.

The survey underscored the need to simplify communication and create reminders as clients tended to forget about their insurance over time. Women’s World Banking and Lead created a marketing programme focusing on the three most important features: amount of benefit per night; requirement for hospital discharge certificate; and life insurance benefit amount. In addition, posters were put up in branches to remind clients about insurance.
Easing the claims experience

By March 2017, six months after the roll out and scale up of the programme, monitoring by Lead found that claims frequency varied significantly across all its 18 branches. Women’s World Banking and Lead conducted another phone survey to understand the reasons behind this phenomenon. Branches were sorted into three groups based on their claims frequency: very low claims frequency; portfolio average claims frequency; and higher than the average claims frequency. 270 clients from each group were contacted to take part in the survey.

Women’s World Banking developed a scoring model to quantify clients’ awareness levels: 10 points for mentioning one of the three key features; 5 points for partially correct mentions; and 1 point for the mention of any other feature. The total points accrued by each respondent would indicate the level of understanding of the insurance scheme. The survey (Table 1) found that 31% of respondents from the very low claims group had zero awareness of insurance, compared to 23% in the average claims group and 25% in the high claims group. The results strengthened our hypothesis that lack of awareness drives low claims frequency.

The survey also revealed that some respondents who had been hospitalised in the recent past did not file any claims. They cited one of three reasons: they forgot they had any insurance; they were unable to get a hospital discharge certificate (either through their own delay in asking for it or inefficient hospital bureaucracy); or because they did not have any trust that they would receive the money.

To address these issues, Lead first organised training for branch managers specifically to drive client awareness. Secondly, we began providing official request letters for clients to present to hospitals in order to get a discharge certificate more promptly. The certificate should be easy to get but can in practice be difficult to obtain in a single visit, and women from low-income backgrounds may lack the confidence or agency to ask hospital officials for these documents. Finally, branch managers paid out claims in front of other clients to demonstrate that insurance cover really works and to reinforce trust in the product.

Marketing evaluation

In November 2017, Lead partnered with AXA Egypt and increased the hospital benefit amount from US$14 (EGP 250) to US$17 (EGP 300) per night. This change was rolled out accompanied by a marketing campaign to inform clients. A phone survey and detailed evaluation was carried out to understand both the effectiveness of the marketing campaign and the factors that influence insurance usage.

This time, Women’s World Banking and Lead surveyed four sample groups based on loan type and history: existing group loan (GL) clients; group loan clients with loans taken out or renewed after November 2017; existing individual loan (IL) clients; and individual clients with loans taken out or renewed after November 2017 (Table 2).

Clients who took out loans after November 1st 2017 had better awareness of the updated features, suggesting that new information did not reach clients receiving their loan prior to that date. Interestingly, group clients had higher awareness than individuals, most likely because information is shared and reinforced in group meetings. However, individuals had a higher claims frequency than groups (for individual male clients, this could be due to their higher morbidity risks).

Individual female clients were found to more likely to seek proper treatment in hospital compared to their group counterparts, due to their being in a more financially secure position to look after their health. Group clients tended to cut short their hospital stays to get back to

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<th>1-9</th>
<th>&gt;=10</th>
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<tbody>
<tr>
<td>Respondents not at all aware of insurance</td>
<td>31%</td>
<td>11%</td>
<td>58%</td>
</tr>
<tr>
<td>Respondents are aware of just having insurance but don’t know any features</td>
<td>23%</td>
<td>7%</td>
<td>70%</td>
</tr>
<tr>
<td>Respondents know one or more key features</td>
<td>25%</td>
<td>11%</td>
<td>64%</td>
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<tr>
<td>Overall</td>
<td>23%</td>
<td>11%</td>
<td>66%</td>
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Table 1: Results of phone survey based on claims frequency
their work and their children, to minimise loss of income and to avoid large hospital bills. Some of the group loan women did not stay overnight in the hospitals and so were ineligible to file claims under the scheme.

While client awareness is crucial to insurance use, it is clear that other factors such as familial responsibilities and financial constraints, especially for low-income working mothers, influence their decision to seek medical treatment. Incomplete treatment reduces their eligibility to file a claim and their health condition can worsen as a result. Lead is looking to develop preventive health management services in order to address these barriers.

**Awareness is key**

Lack of client awareness defeats the purpose of microinsurance. If clients are unaware and lack trust in the product, they will not use it in the first place. To make sure microinsurance is successful in future, insurance providers and distributors must take the following steps: develop clear and simple communications about its benefits; deliver on promises of hassle-free claims processes and meaningful benefits; and use regular monitoring to identify gaps in delivery. Phone surveys are an easy and cost-effective tool for gathering and analysing data that organisations can then use to create solutions to serve their clients more effectively.

### Table 2: Results of phone survey based on loan type and history

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<th>Phone Survey 2</th>
<th>Phone Survey 3</th>
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<tr>
<td></td>
<td>Overall</td>
</tr>
<tr>
<td>score=0</td>
<td>23%</td>
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<tr>
<td>&gt;0 score &lt;10</td>
<td>11%</td>
</tr>
<tr>
<td>score≥10</td>
<td>64%</td>
</tr>
<tr>
<td>Annual claims frequency</td>
<td>Same as average claims frequency</td>
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There is growing interest in how inclusive insurance can contribute to fulfilling the Sustainable Development Goals (SDGs). Climate change, however, threatens our ability to achieve some of the goals, not least SDG1 (End Poverty) and SDG2 (End Hunger). Furthermore, there are significant differences in the risks faced by men and women, which could lead to climate change undermining SDG5: to achieve gender equality and empower all women and girls.

Advocates see index insurance as a tool for agricultural climate risk management. There is growing evidence that it enables farmers to adapt to climate change by facilitating the adoption of climate-smart agricultural technologies and practices. Index insurance has scaled up in recent years and now reaches millions of farmers. However, a narrow focus solely on numbers obscures the socio-economic dynamics in which index insurance is of benefit to some farmers but not others. Little attention has focused on how existing gender inequalities determine farmers’ access to insurance products or whether uptake of products accentuates or mitigates gendered differences, with potential for negative impact on women.

Since 2014, the authors of this paper have worked on an index insurance research project supported by CGIAR’s Research Program on Climate Change, Agriculture and Food Security (CCAFS). We have come to appreciate that, while index insurance may help reduce vulnerability, differential access to insurance products by female and male farmers, and systematic variation of impacts, can reinforce existing inequalities. In effect this could negate the contribution of index insurance to achieving SDG5.

Women represent an untapped target group for insurance with high growth potential. There is a social and business case for factoring gender into the design and implementation of inclusive insurance. Regarding SDG5, a key issue is to improve the design, implementation, and monitoring and evaluation of inclusive insurance initiatives so that they achieve greater gender equality. We argue that our equity assessment framework should be used to capture the predicted and actual impact of inclusive insurance on gender equality. Recognising the importance of gender equality is a fundamental step towards ensuring that inclusive insurance does not undermine the realisation of SDG5.

**Gender equity assessment framework**

There are differences between equality and equity. Equality refers to equal enjoyment by women and men of opportunities, resources and rewards. Gender equity, on the other hand, relates to being fair to both men and women; it may mean treating men and women differently in order to remove gender barriers, and thus ensure equal outcomes. For example, gender barriers to index insurance may mean women are targeted differently in order to facilitate their access to the product and ensure equal outcomes with men.

Gender barriers can be considerable. When women struggle to own land, or their land is controlled by male relatives or husbands, it raises questions of whether women can legally access insurance. Similarly, few women whose husbands have migrated have land titles in their names, and they are therefore ineligible for insurance schemes. In 2016, the Government of India launched the new Prime Minister’s Crop Insurance Scheme aimed at poorer, marginalised farmers. However, lack of documentation and written proof of land tenancy excludes some tenant farmers, women and marginal farmers from insurance cover.
The equity assessment framework in Table 1 can help practitioners understand the factors driving gender inequality, as well as helping to improve insurance design, implementation and evaluation. It can also assist in identifying when and where issues of gender equity and equality require specific interventions. It is relevant to both public and private sectors, and could be promoted by donors when index insurance is included in development and risk management programmes.

When it comes to accessing and taking up insurance, focusing on procedural equity helps prioritise gender issues. The Index-Based Livestock Insurance (IBLI) product in Northern Kenya, established by the International Livestock Research Institute (ILRI) more than ten years ago, provides interesting insights. IBLI aims to mitigate drought-induced livestock losses among pastoralists, by combining satellite observations of forage conditions with livestock mortality rates to calculate clients’ seasonal payouts. At one of the first meetings in Northern Kenya, organised by a local insurance sales team to explain how the product works, the overwhelming majority of those attending were male elders, together with a handful of older women. Cultural norms in the region prevent younger women from attending, but scheduling a separate meeting for them would have enabled their inclusion.7

Paying attention to the knowledge and experience of women also helps the design of an insurance product. IBLI has a strong emphasis on social equity, including gender – for example, the poorest families with very small herd sizes (in some cases only one goat or sheep) are able to access insurance. This is important in a region with frequent correlation between herd composition and ethnic background and/or gender, and as a result much effort has gone into training sales agents and potential clients to ensure insurance is not only bought by the educated or those living near larger communities. Without consistent support from development partners and donors, it is unlikely that IBLI’s focus on procedural equity would have become well established in marginalised areas, although it is possible that alternative interventions such as cash transfer programmes may work better than insurance in some cases.4

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**Table 1: Equity assessment framework**

**THE PARAMETERS: WHAT COUNTS FOR GENDER EQUITY?**

<table>
<thead>
<tr>
<th>Equity dimension</th>
<th>Key issue / examples of relevant questions</th>
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<tr>
<td>ACCESS</td>
<td>Whether and how farmers are able to obtain index insurance, taking into account differences based on gender as related to wealth, resources, and vulnerability to climate risk.</td>
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<tr>
<td></td>
<td>• Are women farmers most vulnerable to climate risks and do they have access to index insurance?</td>
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<td>• What barriers, if any, prevent take-up of index insurance by women farmers?</td>
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<td>• What opportunities exist to enhance women farmers’ take up of index insurance?</td>
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<tr>
<td>PROCEDURES</td>
<td>Whether and how farmers are able to participate in index insurance scheme decision-making and/or implementation.</td>
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<td>• Is decision-making transparent and accountable (and perceived to be so)?</td>
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<td>• Which stakeholders are involved in decision-making and are processes inclusive?</td>
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<td>• Do women have equal opportunities to participate?</td>
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<tr>
<td>REPRESENTATION</td>
<td>Whether and how farmers are able to have their knowledge, norms and values taken into account</td>
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<td>• How do different stakeholders understand gender equity and fairness? What are farmers/stakeholders understandings of climate risk in relation to their practices? Are these understandings gender differentiated?</td>
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<td></td>
<td>• How do knowledge and values regarding investment in insurance products relate to formal and informal risk management / coping strategies engaged in by men and women?</td>
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<tr>
<td>DISTRIBUTION</td>
<td>Whether and how farmers are able to benefit from index insurance, including the distribution of benefits across a farming population.</td>
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<td>• Are benefits equitably distributed in current form for women and men? If not, are there ways to improve fair distribution?</td>
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<td>• If women are excluded from the intervention, are they able to access risk management measures more appropriate to their circumstances? E.g. social protection.</td>
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Conclusions

There is a strong business case for paying attention to gender in ways that permit us to treat women equally in the design and implementation of microinsurance products. SDG5 can be a vehicle for gender equitable action. The attraction of index insurance can nevertheless mask issues of power, social inequality and differential impact. We need to recognise the danger of implicitly reinforcing gender inequality through the design and delivery of index insurance. More consideration must be given to how take up of index insurance is shaped by existing gender inequalities and, in turn, how these inequalities can contribute to different development outcomes for male and female farmers and pastoralists.

Addressing the issue of gender equality in index insurance programmes may initially increase costs, but the additional investment may also lead to market expansion and economies of scale, as well as contributing more substantially to achieving the SDGs. We propose that gender equality should be explicitly factored into index insurance design and implementation in order to avoid reinforcing existing inequalities, and to enhance gender equality in climate risk management. Growing interest in inclusive insurance and poverty reduction can help mitigate trade-offs between realising some SDGs whilst thwarting others. This in turn contributes to more and better practices of mainstreaming gender-sensitive approaches that create lasting impact for both men and women.

5. CGIAR (formerly known as the Consultative Group on International Agricultural Research) was established in 1971 and is a global partnership that unites organisations engaged in research for a food-secured future.
Finding the missing middle: better insurance for small and medium businesses

Micro, small and medium enterprises have significantly differing insurance needs. Treating them the same can undermine their potential, say Cenfri’s Jeremy Gray and David Saunders.

According to the World Bank’s International Financial Corporation, micro, small and medium enterprises (MSMEs) account for more than half of all employment worldwide. The jobs and wealth generated by MSMEs are recognised as important contributors to at least nine of the 17 Sustainable Development Goals (SDGs), but most directly to SDG8: decent work and economic growth.¹

Financial services, including insurance, are essential if MSMEs are to contribute to these goals. Insurance is increasingly recognised as a valuable tool for MSMEs in developing countries, which are vulnerable to risks and have a high incidence of business failure.²

However, having insurance will not in itself automatically enhance the value of a business – MSMEs are not a homogenous group and their insurance needs differ significantly. They range, for example, from a sole-proprietor car mechanic to a tyre manufacturer with up to 249 employees.³ Treating these businesses as if they have the same needs can undermine the potential value of insurance to contribute to their sustainability and growth.⁴

Most literature to date differentiates between micro-enterprises, and small and medium enterprises (SMEs). Micro-businesses, which make up the vast majority of MSMEs, have between one and nine employees and often operate out of necessity. The line between proprietor and business is likely to be blurred, with the result that micro-businesses often have insurance needs similar to individuals.

Conversely, SMEs represent fewer than 10% of all MSMEs⁴ and generally operate out of choice. They are often defined by their size, based on the number of people they employ, but their makeup and needs also differ according to sector, age, geography and economic context. This makes them a highly diverse group requiring tailored insurance products to help them deal with risks. However, there are significant barriers to insurance providers meeting these needs in order to close this gap in insurance markets.

The missing middle

On the one hand, SMEs are often overlooked by banks and insurers that target large corporate businesses and on the other by alternative financial institutions or microinsurers, which tend to serve micro-businesses such as smallholder farmers. Interviews, combined with research on product offerings for SMEs on the websites of large global insurers, confirm that only five of the top 10 insurers worldwide offer insurance products designed for this business category. This gives rise to what is known in SME literature as the ‘missing middle’. This phenomenon is especially noticeable in developing countries, where SMEs account for only 18% of jobs and 16% of gross domestic product (GDP), compared to 57% of jobs and more than half of GDP in developed countries.⁵

The reasons behind the neglect of SME insurance are complex. It’s not just a question of making micro-business insurance products bigger or making corporate products smaller. Micro-businesses are often better served than SMEs because they have similar needs to individuals, and the two groups taken together provide the scale needed to share costs. Aggregators,⁶ smartphones and digital platforms are helping overcome the distribution and aggregation challenges associated with this group.

However, this business model is difficult to replicate for SMEs, whose products need to be tailored for a variety of different business needs. Unlike micro-businesses, the size of the risk pool in comparison to the cost of serving these SMEs on a case-by-case basis is not viable. The result is that few insurers specialise in insurance for SMEs.
Overcoming the barriers

One approach to overcoming this barrier is to enter into a relationship with SMEs while they are still micro-businesses, in the expectation that they will grow. Pioneer Insurance in the Philippines, for example, follows a graduation strategy that adds more cover to the basic products as a business becomes bigger.\(^7\) Growing with a business can pay off for insurers in the long run, as it increases retention, and when it comes to existing SMEs, there are several opportunities for insurers to make incremental gains:

**Utilise new data:** Improvements in connectivity and new data sources such as call detail records, buying behaviour and social media data are enabling insurers to make use of previously invisible economic activity. This data can be used to identify viable SME target markets, design products to better meet their needs, more accurately price for risk, and control the costs that are typically associated with entering new markets.\(^8\) For example, Discovery Insure in South Africa recently launched a product using data and analytics to diagnose SMEs’ business needs to offer multi-peril cover and unique additional covers.\(^9\)

**Leverage new digital ecosystems:** Technological developments have also given rise to new digital platforms that make it possible to aggregate SMEs at scale, allowing insurers to tailor insurance products for larger groups at a lower cost. In 2016, for example, French insurer AXA and China’s largest e-commerce platform Alibaba partnered to offer AXA’s commercial insurance products to SMEs through Alibaba’s e-commerce platform.\(^10\)

**Improve risk management:** For bigger businesses, the emphasis is often on tailored risk reduction, which in turn brings down premiums or minimises losses, thereby increasing the attractiveness of insurance to corporate clients. For example, Ghana’s largest chain of retail department stores, the Melcom Group, experienced large claims following a building collapse in 2012 and a warehouse fire in 2015.\(^11,12\) Their insurer, Activa, brought in risk assessment professionals to help ensure compliance and identify procedures to mitigate similar disasters in the future. The Melcom Group has had no major claims since Activa introduced these risk mitigation procedures, and a similar approach could be considered for SMEs.
We need new business models

Implementing such strategies could lead to incremental gains, but more action may be needed to convince many insurers that SMEs are a viable target market. A new business model that leverages new sources of data, digital ecosystems or improved risk management may be required.

There is often little incentive for insurers to launch new business models in challenging and untested markets. Donors and governments can help by: communicating success stories; building capacity among providers; sharing proven business models from round the world; working with industry to develop MSME insurance product solutions and templates; and providing technical assistance in specific areas such as pricing formulas.

It is clear that the missing middle of business insurance has not yet been eliminated. In the drive to achieve the SDGs, it is vital that we do not continue to overlook small and medium businesses. Only by treating them differently from other MSMEs can we start to understand their unique needs and find new ways to close this gap.
The number of people affected by humanitarian crises has almost doubled from 40 million to more than 75 million over the past decade, with associated aid costs tripling from US$4 billion to more than $13 billion.1 Sustainable Development Goal (SDG) 13 recognises climate change as one of the main drivers of disasters, and that national risk reduction strategies are critical. Insurance could play a crucial role in this, but penetration in many of the worst hit countries remains low, especially in many Muslim majority countries where significant microinsurance penetration is further hampered by an absence of Islamic products.

A pilot project in Bangladesh demonstrates that low-cost Islamic risk financing works in principle, presenting opportunities to scale up insurance against extreme weather events. Islamic insurance, or Takaful – which translates as ‘solidarity’, or ‘mutual guarantee’ – can make a positive impact on people’s lives, livelihoods and assets.

At the heart of the value proposition of Islamic insurance lies a concern about the ethical propriety of conventional insurance business models. Muslim scholars argue that insurers seek to make commercial profit by gambling that claims approved will be less than premium income, albeit using sophisticated statistical methods. Takaful is an alternative, Sharia-compliant co-operative system of payment in case of loss.

Conventional insurance contracts are too uncertain, as the payment of the premium provides an undefined benefit (or in the absence of a risk event no benefit at all), making such a contract invalid under Islamic jurisprudence and financial ethics.2 Moreover, conventional insurers invest premiums in interest-bearing instruments, which Islam also prohibits. Muslims believe proprietary insurance is essentially unethical because ownership of the premium pool should remain with those who contribute to it rather than with the insurance company.3

This requires a business model close to that of a mutual or co-operative insurance. Individual or corporate Takaful members do not pay premiums. Instead they make regular ‘donations’ and receive a pre-defined pay-out in the event of loss, plus a return on the investments made in the insurance fund. This fund is managed on their behalf by a Takaful operator, which invests the contributions in a Sharia-compliant manner and receives a management fee for its services.4

Lessons learned from piloting micro-Takaful in Bangladesh

‘Mithapukur Sonirvor Mohila Somobay Somity’ brings together representatives of all the Self-Help Groups (SHGs) set up by Islamic Relief Bangladesh in the Mithapukur Upazilla District in 2015. The organisation has overall coordination and management responsibility for 153 SHGs, which provide savings and interest-free loans to their 3,500 members.

A small contribution of 100 taka per year (approximately US$1.15) is collected from each SHG to manage the scheme. Individual members each pay 100 taka annually to trigger pre-defined benefits in the event of hazards such as death, disability, hospitalisation and business loss, including those caused by weather-related events.

Tables 1 and 2 show the Mithapukur Takaful pilot has been performing successfully by settling claims from community members whilst also generating investment income without eroding the pool fund, making an operating profit of 180,000 taka (US$2,106).
The scheme has gone some way to enhancing beneficiaries’ ability to withstand external shocks, without the burden of excessive premiums. In total, 90% of SHG members have taken up the scheme, demonstrating a clear demand for Sharia-compliant, low-cost community-based Takaful.

Community-based micro-Takaful could be a catalyst to help reduce vulnerability and build resilience among poor members by expanding risk coverage to include a wider range of extreme climatic events. Combined with awareness-raising campaigns and other measures to strengthen preparedness and resilience, Takaful provides an individual and community safety net and an environment for investment.

What we learned from product development

Takaful could close the current risk gap, but uptake will only increase if the benefits are more appropriate to the size of potential loss and damage. Takaful operating principles mean benefit pay-outs from the solidarity fund are fixed, rather than being based on a detailed assessment of the loss or damage incurred.

The pilot scheme threw up several challenges. Members were sceptical about receiving a reasonable benefit despite their low contribution; Re-Takaful possibilities should be investigated to avoid a fund shortfall; pay-outs were only made to 1.5% of the membership; and small increases can easily wipe out the pool fund. In addition, ensuring Shariah compliance with appropriate scholars is important for the credibility and acceptability of the scheme. As well as considering conventional insurance products as being un-Islamic, they were also sceptical about the Takaful branded product itself and sought additional assurance of its compliance with Islamic law.

Product development drivers of climate risk insurance

The pilot shows that Takaful only works if the benefits are well understood by the community, yet the high uptake of members in self-managed SHGs also demonstrates real demand. The question remains of how to scale up the current offering – for example, by offering cover against additional hazards to agriculture and livestock from extreme weather events, or including parametric insurance features to make it fit for climate change. This might be extremely challenging for a community-administered scheme, but with Bangladesh signing up to the SDGs, government agencies could provide support. Under SDG13, adaptation must go hand in hand with efforts to integrate disaster risk financing measures into national strategies.

Evaluation of the pilot threw up a number of key challenges to developing an effective climate risk insurance product. Given that the scheme was initiated by a non-governmental organisation (NGO) but implemented by the SHGs themselves, further product development will add complexity to the management of a community Takaful scheme. Sophisticated technical expertise will be required for the pricing mechanism – for example, by using insurance consultants or drawing on the modelling expertise of Re-Takafuls.

The lack of current and historical weather data represents a significant barrier, particularly when combined with the high-risk margins of climate-vulnerable countries. Accessing and analysing such data proved a major challenge during the pilot, and external assistance from either industry or government agencies dealing with climate

| Table 1: Management fee, contribution and investment income 2016 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total # of participating SHGs | Total Takaful fund collected (in BDT) | Investment (in BDT) | Profit on the Takaful fund | Operational expenses to manage the fund (in BDT) |
| 153 | 330,200 | 198,120 | 21,273 | 3,235 |

| Table 2: Payouts per hazard area in 2016 |
|-----------------|-----------------|-----------------|-----------------|
| # of contributing SHG members | For death benefit | For disability | For hospitalisation | For business loss |
| # | BDT | # | BDT | # | BDT | # | BDT |
| 50 | 22 | 110,000 | – | – | 26 | 52,000 | 2 | 6,000 |
change adaptation will surely be necessary. Satellite data might help with modelling, but only if available in sufficient detail over time.

Affordability is another challenge, given the high risks of extreme weather events. It is unlikely the current low-cost set-up will be sustainable, with implications for affordability and uptake. Further expansion would require support from government and/or donors.\(^5\)

A further problem with offering microinsurance against weather-related disasters is that disasters usually affect whole communities or regions (covariate risk), triggering a large number of claims at the same time.\(^6\) In order to work, schemes must generate large-scale diversified sales – something that has rarely been achieved so far.\(^7\)

**Scaling up**

The pilot has laid a foundation by incorporating climate risk into community-based Takaful microinsurance. However, it is unlikely the scheme can be scaled up without a large part of the risks being pooled among Re-Takaful institutions. If Muslim-majority countries incorporate Takaful-based climate risk insurance into their national strategies to meet SDG13, it could be a real game changer. Given the ambition of G7 countries to reach 400 million uninsured people by 2020, a multi-stakeholder effort to invest, build capacity and promote community-based Takaful in addition to sovereign schemes could be critical. Since community buy-in is essential, Takaful should become the intervention of choice in Muslim-majority nations.

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Growing credit-linked and stand-alone index-based drought insurance in Uganda

Marcel van Asseldonk, Joost van der Woerd and Eleni Vakaki explain how microinsurance is helping farmers to cope with years of drought.

Droughts are the main cause of crop failure in Uganda and climate change is making them worse. Severe droughts and crop losses were reported in 2002, 2005-2008, 2010/11 and 2016/17. A recent agricultural risk assessment for Uganda found that drought occurs approximately every five years, affecting 25,000 people or more and causing average annual losses of US$44 million.

Low-cost, large-scale microinsurance can help to achieve Sustainable Development Goal (SDG) 13: Take urgent action to combat climate change and its impacts. Across Africa, emerging index-based insurance is getting better at claim handling, but direct sales to individual smallholders remain challenging. Scaling up requires cooperation with aggregators in the agricultural value chain including financial services (insurers, brokers, banks and microfinance institutions), as well as seed and fertiliser merchants, traders, processors and farmers’ organisations.

Scaling Up Micro-insurance in Africa (SUM-Africa) aims to demonstrate the viability of low-cost and large-scale index-based drought insurance in Uganda. The project compares different market channels (for example, credit-linked versus stand-alone insurance), and different index-based insurance products (such as generic or crop-specific products).

Index-based relative evapotranspiration drought coverage

Index-based insurance is cheap as it requires no on-site loss assessment. Pre-underwritten index products and real-time satellite-based loss monitoring ensure simpler, faster underwriting and claim handling.

In Uganda, index insurance is based on relative evapotranspiration (RE). Since evapotranspiration – the combination of evaporation and plant transpiration – is proportional to CO$_2$ uptake, and consequently to plant growth and crop yield, RE is an accurate measure of drought and a suitable index for agricultural drought insurance, as well as being a better indicator of crop growth than precipitation. As such, the explanatory value of an RE index is also higher than a precipitation index for credit risk.

RE index insurance is designed for flexibility in commodity, season and level of coverage. Optional features – such as target premium rates, frequency of small and large pay-outs and different levels of spatial aggregation – aim to reduce price and simplify sales and
Figure 1: Historical loss simulation for Malera sub-county in Bukedea district

Figure 2: Insured losses during the late season of 2016, mapped at sub-county level
administration, whilst maintaining a sufficient pay-out level in drought years. Figure 1 shows a historical loss simulation of pay-outs in any given season in one district in Uganda and match the recent reported severe drought in the season of 2016. Moreover, spatial differences in the level of the insured losses were observed if mapped at sub-county level, given the example of the late season of 2016 (Figure 2).

Spatially aggregated rates and pay-out calculations can be set to village, sub-county or district level. Importantly, spatially aggregated products are easier to understand for both smallholders and aggregators. With the product currently offered at sub-county level, the spatial basis risk (the difference between index measurements and actual losses) is kept at an acceptable level.

Since 2014, several RE-based products have been developed and marketed in Uganda, including crop-specific (Arabica and Robusta coffee, beans and maize) and generic drought cover. Crop-specific coverage is based on particular crop characteristics and drought sensitivity, whereas generic cover aims to provide general protection during the rainy seasons and thus is suitable for intercropped smallholder gardens. The index-based drought insurance schemes that are sold through the AIC consortium are designed and monitored by EARS Earth Environment Monitoring BV (EARS E2M), using RE time-series data from 1982 to date with real-time hourly data and drought monitoring at three kilometre ground resolution.

The Ugandan government subsidises 30% of the premium for commercial farms and 50% for small-scale farms, rising up to 80% in 33 of the most disaster-prone districts of the country, where premiums are higher. Basic premiums on all subsidised products are limited to 5% (10% in disaster-prone areas) to ensure affordable prices and adequate coverage, although farmers in higher-risk areas still have to bear part of the drought risk themselves.

**Insurance uptake**

In 2017, sales of both credit-linked and stand-alone index-based insurance reached approximately 45,700 smallholders across Uganda. Generic credit-linked drought index insurance is most widespread because it is compulsory and sold via banks with a large portfolio. Coffee insurance also performs well, and to a lesser extent, so do other commodity-specific products.

Direct sales to smallholders are a bigger challenge, so the project has collaborated with the National Union of Coffee Agribusiness and Farm Enterprises (NUCAFE), one of the largest organisations of coffee producers in the country, to try and scale up. Coffee is a valuable cash crop with a relatively well organised sector. NUCAFE is committed to helping provide drought cover to its members, with hub managers and field staff actively promoting and selling products. Farmers can pay their premiums in-kind out of their coffee harvest instead of finding the money up front. In addition, any insurance pay-outs are offset against payments for the processed coffee beans after they have been sold by NUCAFE on behalf of the farmers. However, this approach only works in more organised value chains where aggregators are closely linked to the producers and can leverage their organisational capacity and existing trust relationships.

Figure 3 (overleaf) provides an overview of index insurance sales in Uganda in 2017. The average sum insured was around US$1,750 for credit-linked and US$300 for stand-alone insurance, with average gross premiums of US$34 and US$18 respectively. Net premium rates before VAT for credit-linked and stand-alone insurance averaged 1.5% and 5% after subsidy. Variations in the basic premium largely depend on subsidy rates in different areas.

**Lessons learned**

Climate insurance enables smallholders to cope better with extreme weather and climate change, but widespread penetration hinges on the co-operation of aggregators and effective market outreach. In Uganda, sales of drought index insurance are rising substantially, mainly driven by large aggregators in the financial sector and a commercial, well-organised value chain. Aggregators are crucial intermediaries, channelling brokerage services to a vast number of individual smallholders who would otherwise be too difficult to reach. They allow scale of outreach and transactions, and create much-needed trust between the index service provider, the insurance companies and farmers.

Good partnerships are essential for scaling up microinsurance in Africa. Microfinance institutions and banks benefit from linking credit and mandatory insurance, while insured smallholders have a better credit rating because they are less financially exposed. Financial institutions can increase their agricultural portfolio by reducing both absolute and proportional risk, which in turn should ultimately result in more competitive agricultural loans, better access to credit, lower interest rates and reduced collateral requirements. Banks and other lenders have the power and the motivation to enforce mandatory bundles, while different incentives are needed to convince farmers to
purchase stand-alone insurance products. A major challenge for these aggregators and for the agricultural sector in general is to increase awareness and understanding among smallholders about their risk exposure and the possible ways to reduce, transfer or deal with these risks.

Finally, government support is essential to drive the increased uptake of insurance in agriculture. Government subsidies in Uganda and some other African countries provide an effective incentive for farmers to deal with extreme weather risks and ultimately to help them build a more sustainable and resilient agricultural sector.

Figure 3: 2017 Overview of credit-linked and stand-alone index insurance in Uganda

Unpredictable extreme weather events are wreaking havoc, driving poverty and intensifying disaster risks for communities around the world. Vulnerable people are caught in a vicious cycle of poverty because they are more exposed to risks and ill equipped to deal with them. The problem is compounded because most losses in emerging economies are uninsured.

Sustainable Development Goal (SDG) 13 aims to combat climate change and its impacts. Promoting holistic risk management strategies – including appropriate risk identification, transfer, mitigation, preparedness and post-disaster reconstruction – will help achieve SDG13. Inclusive insurance is one essential risk transfer tool that can mitigate the economic losses caused by climate change, increase the resilience of vulnerable people and close the protection gap.

Public-private partnerships (PPPs) are widely promoted as a way to directly or indirectly improve climate change risk management. However, in the course of its work in emerging economies, MiCRO has encountered poor PPP coordination, leading to inefficient investments and duplication of efforts. MiCRO’s innovative organisational approach aims to improve coordination and close the protection gap by supporting holistic risk management and by entering into smart partnerships.

**Insurance is only one piece of the puzzle**

MiCRO creates holistic risk management solutions with two components. Firstly, a risk transfer mechanism is designed for the specific conditions and needs of each intervention, for example, using microinsurance, meso-insurance or other risk transfer mechanisms such as pooling. The second component is the Value Added Programme (VAP), which increases customers’ resilience, productivity and livelihoods. In order to offer the

VAP, MiCRO connects existing initiatives with organisations working on disaster risk prevention and preparedness.

In Central America, MiCRO and its partners currently offer the first index-based catastrophe microinsurance for small and micro-entrepreneurs to cover business interruption caused by excessive rainfall, drought and earthquakes in Guatemala and El Salvador. Unlike other weather insurance products, business interruption includes disasters that reduce sales or raise costs, meaning both ‘agro’ and ‘non-agro’ entrepreneurs can be protected against indirect losses.

The level of payouts ranges from small amounts for medium-sized events to large payouts after a catastrophe. The product is commercialised and bundled with loans through banks and financial institutions. In November 2016 MiCRO, Aseguradora Rural and Banrural launched Esfuerzo Seguro (‘Safe Effort’) in Guatemala. This was followed in June 2018 in El Salvador by Produce Seguro.
‘Produce Safely’), a joint project by MiCRO, Seguros Futuro and Banco de Fomento Agropecuario. By July 2018 more than 6,700 clients were protected by Esfuerzo Seguro – 53% of them women and 70% farmers. Almost half (49%) had received at least one pay-out, mainly due to drought.

However, risk transfer is only one piece of the risk management puzzle. MiCRO and its partners also offer a VAP that introduces clients to simple messages and tools to improve education and awareness of mitigation, adaptation, impact reduction and early warning. MiCRO works closely with local and international partners to avoid duplication and to ensure existing interventions reach clients, acting as a bridge to trustworthy and lasting partnerships.

The VAP is not about MiCRO offering extra services but instead aims to connect stakeholders that can benefit policyholders. For example, MiCRO works closely in Guatemala with the National Coordinator on Disaster Risk Reduction (CONRED) and the World Food Programme (WFP). The VAP was initially launched as a pilot with two main components: firstly, a ‘prevention route’, which clients follow in order to receive a 72-hour emergency kit; and secondly, Disaster Risk Reduction (DRR) fairs where clients and their families can learn about their risk exposure and how to manage it. Both components were designed in collaboration with CONRED in line with its strategy to promote resilience, and the product is accompanied by a social marketing campaign.

MiCRO recently partnered with WFP Guatemala to give Esfuerzo Seguro clients access to AgriUp, an online platform designed by WFP to provide weather alerts, farming advice and nutrition tips. This is another example of MiCRO leveraging existing relationships to benefit thousands of clients at minimal additional cost.

Most of the funding to market test the VAP came from the Multilateral Investment Fund of the Inter-American Development Bank (IADB/FOMIN). MiCRO’s medium- and long-term aim, however, is for local partners to understand the benefit of including the costs in their marketing and to use disaster risk reduction as a competitive advantage.

Smart partnerships are key

Smart partnerships are not only essential for the SDGs, but they are critical for MiCRO’s business model. MiCRO itself is a true public-private partnership. Current shareholders include the Climate Adaptation Platform (CAP) managed by KfW on behalf of the Swiss Development Corporation (SDC), Mercy Corps, and Fonkoze, one of the largest microfinance institutions in Haiti. The Central American Disaster Microinsurance Expansion (CADME), a programme executed by MiCRO, currently has the support of the SDC and Swiss Re as a strategic partner. In the past, the programme received grants from the Multilateral Investment Fund (MIF) managed by the Inter-American Development Bank (IADB) and Australian Aid.

MiCRO’s pioneering, collaborative approach to reducing the impact of climate change is already showing promising results. By designing and implementing holistic solutions and building smart partnerships, this work contributes to the achievement of the SDGs and supports capacity building for market initiatives to close the protection gap. Expanding into new countries and designing new products are in line with the organisation’s commitment to ensure that more people are protected against the effects of extreme weather events.

MiCRO could not do any of this by itself. Smart and strong partnerships between the private and public sectors are key to build resilience, reduce costs, avoid duplication and achieve tangible results.

Non-life business lines account for between 0.5% and 2% of insurance penetration in most African countries, but many insurers are prevented from harnessing the potential for growth because of existing infrastructure and operational challenges. Cumbersome manual processes resulting in costly claims processing and fraudulent activity across the process flow are largely to blame.

Claims falling into non-life categories – such as automotive – still rely heavily on in-field assessors, resulting in longer cycle times and loss of transparency across the claims process. Research shows customer trust is at its lowest point during the claims process and this is reflected in countries such as Kenya, where insurers have been ordered by the Insurance Regulation Authority (IRA) to reduce claims settlement time from three months to 30 days to combat increasing levels of consumer dissatisfaction.

InsurTech presents a logical and relevant fit for the traditional claims process, as evidenced by the growth in claims automation tools available on the market today. Indeed, we are seeing technology increasingly used to achieve what has become known as a ‘Touchless Claim’, which requires no human intervention. While many African insurers are a long way from completely touchless claims handling, some digital claims solutions could really help solve the primary challenges of greater efficiencies, improved customer satisfaction and increased transparency.

Virtual claims processing
A recent US study revealed that insurers using virtual claims handling experienced 80% faster cycle times than their peers using traditional claims handling methods.

Covea Insurance in the UK is one example where a digital solution is being applied to create claim efficiencies. Covea partnered with Audatex, a solution provider that helps to streamline motor claims by applying first notification of loss (FNOL) and rapid allocation manager (RAM) to help claimants arrive at a clear, unambiguous description of the damage to their car without requiring any technical expertise. The insurer integrates into Audatex’s back-end systems to enable end-to-end claim processing, including allocating repair work between the insurer and its body-shop network.

Another example is Snapsheet in the US, which has recently raised US$12 million in Series C funding (a third injection of investment capital from outside sources). The company’s cloud-based software is used by insurance providers to guide users through a photo and information gathering process at the scene of an accident. It is white-labelled as a mobile application for insurance providers and in the backend, Snapsheet helps insurers to process claims virtually without needing an adjuster to inspect the vehicle. Snapsheet intends to use the funds raised to further integrate crowdsourced photos, telematics and machine learning into its platform.

Telematics has also already started delivering on its promise of enabling greater accuracy for underwriters. Additionally, integration with cloud applications to trigger FNOL and detailed imagery of accidents is reducing claim processing times for providers such as Discovery Insure in South Africa, which has been applying telematics to its insurance processes since 2013.

Redesigning the claims process in Africa
In regions such as Africa, more accessible technologies including cloud systems and mobile phones are being applied to iron out claim processing issues associated with data capture, storage and fraud.
Insurers see significant opportunity to increase efficiency and cut costs. MALCOLM allows a broker or agent to allocate an assessor, to speed up the process and reduce the cost of assessments by reducing the number of steps and iterations involved in allocating assessments. Brokers also confirmed the technology could ease their concerns about transparency, because currently they are the main point of contact for the customer, yet have no visibility on the status of the claim.

MALCOLM can manage fraud in two ways. Firstly, the app includes Global Positioning System (GPS) location functionality on photos so insurers can identify whether assessors are taking too long between photos or are taking photos of different locations. Secondly, assessor automation functionality reduces the risk of claims administrators receiving kick-backs or financial incentives from assessor firms.

Lastly, by digitising the claims process, insurers can use data analytics to improve pricing as well as to tackle fraud. Currently the process is mainly paper-based and in some cases finding one file in an archive can take an administrator an entire day.

Mapping MALCOLM’s process flow was critical for ensuring lines of accountability and determining the appropriate evaluation criteria for the project. Results from the pilot are still coming in, and will be evaluated against the following indicators: improved claims process; timeliness; reduced cost of claim (currently at KES 7,600 or US$75); increased number of claims processed per day (currently the insurer is registering between 15 and 20 claims per day, using seven claims managers); claims logged per assessor per day; fraud detection.

However, it is worth noting that, as with most digitisation projects, the greatest challenge is often around change management and getting traditional companies to embrace new technology.

**Conclusion**

The move to new digital channels that can facilitate and improve traditional insurance processes in emerging markets is still some way off. For example, KPMG estimates that as many as 40% of organisations in East Africa have not yet embraced mobile technology as part of their operational model. Insurers in emerging markets have a real opportunity to achieve growth in their domestic markets, but only if they are prepared to embrace change through innovations that deliver customer value and create efficiencies.
Figure 1: MALCOLM (Mobile Application Linked to Claims Operations and Learning for Microinsurance)

BEFORE

1. Client rings broker to lodge a claim.
2. Broker checks client is paid up and logs claim on MALCOLM web portal while client is on the phone.
3. MALCOLM puts assessment 'up for grabs' for any assessor with the right skill in the right location.
4. Assessor accepts the job on smart phone and navigates to risk site using Google maps. Malcolm SMSs client with expected time of arrival.
5. Assessor completes the assessment and submits in digital format.
6. Assessor does the assessment in person.

BECOME

1. Client rings broker to lodge a claim.
2. Broker checks client is paid up and phones insurer.
3. Insurer checks policy is paid up (taking 24 hours) and contacts assessment firm.
4. Assessment firm coordinates with their assessors by phone.
5. Assessor writes up the report the next day and submits it in PDF or hard copy.

7. Insurance Regulatory Authority, Quarter 4 report.
Emerging supervisory trends

The Access to Insurance Initiative (A2ii) is in a unique position to monitor and observe trends in inclusive insurance supervision and regulation. Hannah Grant reports on the main issues to emerge over the past year.

Developing regulations for increased access

Forty-seven supervisory authorities across Africa, Latin America, the Caribbean, Pacific and Asia have, or are in the process of developing, regulations aimed at increasing access to insurance. This compares to 41 just a year ago. These arrangements are usually released in the form of a microinsurance regulation and typically include a definition of microinsurance, as well as proportionate approaches to areas such as licensing, distribution, product approval, disclosure, premium collection and claims payment. Supervisors, especially in Latin America, increasingly talk in terms of inclusive insurance rather than microinsurance. This ensures that all underserved consumers, not just the low-income market, are included within the scope of the regulation. For example, in Costa Rica, the elderly have been identified as being underserved and thus have a special focus in the regulations.

The main aim of this type of inclusive insurance regulation has been to broaden the range of channels, especially mass channels, which are permitted to distribute insurance. New categories have been created to ensure these distribution channels are included under the regulatory umbrella. These include operadores de seguros autoexpedibles (insurance operators) in Costa Rica, comercializadores de seguros (insurance marketers) in El Salvador and Guatemala, and representantes de seguros (insurance representatives) in Brazil.

Encouraging market development

It is a given that insurance supervisors are responsible for consumer protection and financial stability, but market development is increasingly being added to their mandate as well. A growing number of supervisory practices are being used to help stimulate insurance market growth, ranging from tried and tested approaches (such as ‘test and learn’ and open dialogue with the industry and other sectorial supervisors) to more resource-intensive initiatives including innovation hubs and sandboxes.

Until recently, innovation hubs and sandboxes were seen solely in more developed countries and in the banking sector, but they are becoming increasingly common in insurance too. The Monetary Authority of Singapore and the UK Financial Conduct Authority have led the way but several developing countries are looking to follow suit, with Kenya among the countries planning to set up a sandbox in their jurisdiction.

Responding to the demand from insurance supervisors for more support to implement their market development objectives, A2ii launched an inclusive insurance innovation Lab in late 2017. Multi-stakeholder teams from Albania, Ghana, Kenya and Mongolia have come together over the course of a year to examine why insurance penetration is low in their countries and to come up with innovative solutions. The high level of interest and commitment shown by supervisors participating in the Lab underlines the importance that insurance supervisors attach to their market development role. The Lab is developing innovations such as an insurance education game app for mobile phones in Mongolia, an index-based product in Albania to cover against frost damage to seedlings, an awareness-raising clinic to promote insurance to small- and medium-sized enterprises (SMEs) in Ghana, and the establishment of a regulatory sandbox in Kenya.

In addition, several countries are putting structures in place to ensure that the work of the Lab teams can continue beyond the lifetime of the project. Participants do not generally see regulation as a barrier to market development, but the success of the Lab has hinged on...
the involvement and leadership of insurance supervisors who can increase awareness of opportunities and motivate other important market players to participate.

**Developments in digital financial inclusion**

Digital financial inclusion could be a game changer. Already it is transforming business models in the insurance sector by improving access and targeting, as well as reducing, administrative overheads. Supervisors recognise and welcome digital developments that could create greater access at more affordable prices. However, a degree of caution is also evident with supervisors wanting to protect consumers from the potential risks of new technologies.

The forthcoming International Association of Insurance Supervisors (IAIS) Applications Paper on digital financial inclusion, which provides supervisors with much-needed guidance, is therefore keenly anticipated.

Legislative change takes time, and most insurance legislation was developed with more traditional business models in mind. As a result, domestic insurance law often fails to take account of digital transactions, and even where supervisors support change it can take time before practices such as e-contracting and electronic signatures are allowed. However, there are signs of positive progress, with jurisdictions including Brazil, Mexico, the Philippines, Ghana and India having recently
It is worth noting that supervisors have not yet fully addressed the consumer protection risks associated with greater availability of data and the use of data analytics. Data is not in itself a bad thing. For example, better data on consumers and their risks, particularly in inclusive insurance markets, means insurers no longer have to charge higher premiums to account for uncertainty. Enhanced data enables insurers to obtain a more accurate understanding of consumers’ needs, design better products and price them more accurately. However, better data can also increase the risk of exclusion, with higher-risk consumers finding themselves priced out of the risk pool or simply not being offered insurance at all. So far there have been few cases of this occurring in practice, but in markets with lower competition (which is true for most inclusive insurance markets) and high-risk consumers, the risk of it happening in the future is very real.

A2ii is finalising a study that will help supervisors to improve their understanding of the risks associated with data, and a briefing note highlighting some of the study’s initial findings was published earlier this year. It suggests that consumer data protection is not solely the responsibility of the insurance supervisor. The communications or data protection regulator also need to be involved, but that data-related risks pose a particular challenge for insurance supervisors.

Supervisors are monitoring developments in digital technologies very closely and are keen to learn from their peers in both developing and more developed jurisdictions. The recently established IAIS FinTech virtual forum is particularly welcome, as it provides supervisors with a platform where they can share developments from their own countries and learn from others.

**Increasingly complex formalisation**

Formalisation has been a constant challenge in inclusive insurance markets. Informal providers are still widespread, despite efforts by insurance supervisors who are often unable to gauge either the depth or the breadth of informal systems in their jurisdiction, or the risks to consumers. Recent positive developments include the new South African insurance regulatory framework and microinsurance standards, which came into force in July 2018. The framework paves the way for a long-awaited bespoke licensing regime for funeral parlours, which aims to put an end to consumer abuses by unlicensed entities.

Developments in InsurTech and the involvement of new digitally-enabled underwriters and distributors have left supervisors struggling to ensure all entities are operating within the licensed sphere. Formalisation challenges traditionally involved microfinance institutions (MFIs) adding credit life, or unlicensed cooperatives providing insurance to their members, but now regulators have to deal with insurance via mobile phone apps, technology platforms and peer-to-peer networks. A2ii recently organised a dialogue event exclusively for Latin American supervisors in Brazil to help them meet these new challenges, and to provide them with an opportunity to share experiences and learn from experts.

**Data gathering and analysis**

Data collection and analysis continues to be very limited, particularly when it comes to data specific to microinsurance. As a result, supervisors are limited in their ability to review and report, or to design effective and appropriate policy responses for present and future needs. In response to a request from the IAIS Implementation Committee, A2ii organised a call with supervisors to examine the use of different ratios and cost structures in supervisory reviewing and reporting. The considerable level of interest shown by supervisors demonstrates their desire to implement improvements in this area.

**Conclusion**

The overall trajectory of change in regulation and supervision is positive, with more supervisors developing inclusive insurance regulations and more resources being dedicated to supporting insurance market development. Digital innovations present insurance supervisors with new challenges, while existing topics such as data collection and formalisation remain. Supervisory capacity building is as vital as ever to help supervisors deal with these challenges while simultaneously supporting the development of insurance markets.

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The Microinsurance Network (MiN) has been tracking the evolution of microinsurance since 2007, starting with the publication of The Landscape of Microinsurance in the World’s 100 Poorest Countries. Back then, the project team identified 7.8 million people who were covered by microinsurance in Latin America and the Caribbean (LAC). According to the latest report, coverage in the same set of countries stood at 17.6 million individuals by the end of 2016 – an increase of 126%. Argentina, Brazil, Chile and Mexico, which were not part of the original 2007 study, together add another 34.1 million people. Progress is indisputable but inclusive insurance remains a low priority. Clearly, there has been a significant increase in the number of low-income people in the LAC region with insurance cover of some kind. The variety of insurance products and services has also increased and now extends well beyond mandatory credit-life insurance. Uptake of life and non-agricultural property insurance has grown fastest since the last LAC Landscape Study in 2013. Encouraging though this is, however, the low-income market remains a low priority for insurers in the region. They cite lack of demand, inadequate distribution channels and insufficient market data to inform product design as key reasons for their lack of enthusiasm.

Insurance services targeting low-income consumers still represent a tiny fraction of national insurance markets in the LAC region when measured by premiums. For example, Figure 1 (overleaf) shows that in 12 out of 17 countries for which data was available, microinsurance premiums represented less than 1% of the total, and in a further three countries it was only slightly more than 1%. Guatemala and Ecuador were the only countries with a significantly higher percentage, at 4.1% and 5.3% respectively.

Scale is essential for a sustainable business case. Microinsurance walks a tightrope to maintain a balance between affordable insurance products that are accessible for value-conscious, cash-constrained target customers, yet that can still break even in the face of high transaction costs per dollar of premiums collected. Narrow margins make scale essential, and as a result the barriers to entry may prove high, especially where successful implementation requires significant investment in back-office technology for efficient premium collection and claims processing. Successful implementation is a long game, and even patient investors must prioritise their capital. Impact investors, including public sector investment funds, remain critical to ensuring that microinsurance programmes get the necessary time to reach maturity and become self-sustaining.

Market prioritisation is therefore key. The poorest countries are not necessarily the largest markets for microinsurance, or the most promising. Firstly, per capita Gross Domestic Product (GDP) cannot tell us how many individuals or households are potential microinsurance customers. Over the years, both project teams working on the Landscape Studies and commercial players seeking to come up with a measure for target market size, have concluded that consumers spending between US$2 and US$10 a day, in terms of purchasing power parity, are likely microinsurance customers. This excludes the very poor and clarifies the focus of microinsurance: to ensure that people emerging from poverty are able to develop resilience in the face of risk, so that when bad things happen, they do not simply fall back into deep poverty.
The environment may matter more than size

Microinsurance regulations do not make markets, but enabling environments do. Peru and Colombia serve to demonstrate this point, since both countries have relatively successful microinsurance markets, with double-digit coverage ratios. Specific microinsurance regulations were introduced in Peru from 2007 and have undergone successive reviews since then to improve financial inclusion.

In Colombia there is no specific microinsurance regulation, but there is explicit government support for financial inclusion. An extensive case study of Colombia published in 2008 found that “the current insurance regulatory framework generally does not hamper microinsurance”. However, it was specific players in the private sector, attracted by significant potential for profit from low-income segments, who were driving the market forward using innovative distribution channels such as utility companies to reach customers.

From a late 2018 perspective, as the term ‘microinsurance’ moves out of vogue, it is clear that the naming of regulation is less important than what it does. Discussions at a series of Consultative Forums organised by the MiN in partnership with the Access to Insurance Initiative (A2ii) and the International Association of Insurance Supervisors (IAIS) strongly suggest that an enabling environment does not result from just one set of sectoral...
regulations. Policy coordination between sectors is increasingly important to facilitate innovative partnerships and emerging technology solutions that contribute to better customer service and economic viability. There is no ‘one size fits all’ – each country has its own policy legacy and specific political economy. However, policy makers’ concerns that consumers should be protected and served with value-added products and services is common across the whole sector.

**Markets are made by motivated champions**

The significance of motivated champions is underlined by early movers such as Peru and Colombia, where the critical mass needed to kickstart the market was achieved by just one organisation offering a single, simple product. In Peru this was a single entity offering mandatory credit life insurance, while in Colombia, a single provider sold funeral insurance. Similar examples can be found in other markets and regions.

**If data isn’t measured, does it exist?**

It is costly and sometimes nearly impossible to obtain robust representative data on the number of lives covered by microinsurance and the related gross written premiums. Aside from the issue of trust, and in the absence of a legal requirement, insurance providers have little incentive to share such information other than an interest in supporting an industry-wide benchmark. When it comes to data to provide better insights into the quality of products – such as claims ratios, time to settle claims and other key performance indicators – there is even less incentive to share, and the systems to collect it may not exist internally. This is by no means a specifically Latin American problem.

The goal of the Landscape Studies and World Map of Microinsurance is not simply to provide a snapshot of how much insurance is out there. The raison d’être of the programme is driving better quality services. To that end the 2018 Landscape Study, which focuses on the Africa region, will trial a new methodology to be implemented globally from 2019. Partnership is inherent in the new approach, which seeks to work with insurers to identify which data is needed, which data is missing and to develop solutions for filling the gaps.

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3. With the caveat that in India, for example, regulatory changes introduced in 2002 obliged insurance companies to ensure that a minimum percentage of their premiums consisted of products sold in specific rural areas. This fuelled the growth of microinsurance but the quality of products sold, in terms of their value to the poor, may have been compromised.


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**Andrea Camargo**  
MICRO

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**Dr. Conchita d’Ambrosio**  
University of Luxembourg

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**Saskia Kuhn**  
GIZ (Sector Project Global Initiative for Access to Insurance)

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The Microinsurance Network is the global network of microinsurance experts dedicated to promoting access to valuable microinsurance for low-income populations.

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Publications:  
[www.microinsurancenetwork.org/resources](http://www.microinsurancenetwork.org/resources)

info@microinsurancenetwork.org

Twitter: @NetworkFlash

Microinsurance Network,  
39, Rue Glesener  
L-1631 Luxembourg  
Tel +352 26 29 78

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