



PUW 2023-03 June 2025

Improving Access to Tailored Insurance for Smallholder Farmers in Malawi and Nigeria

1. DEVELOPMENT RELEVANCE

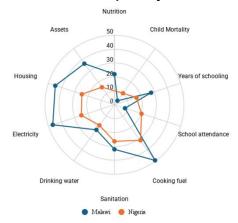
Economic and poverty context

Malawi - Approximately 80% of the population of Malawi are rural farmers who rely on small-scale agriculture for their livelihoods. Over 70% of the population lives below the international poverty line. Increasingly severe weather events have exacerbated poverty and food insecurity.

Nigeria - 88% of Nigeria's total farming population are smallholders, and more than 72% of them live below the poverty line.3 In 2025, more than 33 million Nigerians are projected to face acute food insecurity.4

Table 1: Population and economic indicators ⁵	Malawi	Nigeria
Population in millions (2023)	21	228
GDP growth (2023)	1.90%	2.90%
Inflation (2024, 2023)	32.20%	24.70%
Foreign direct investment (net) (% of GDP) (2023)	1.60%	0.50%
Net ODA received (% of GNI) (2022)	11.20%	1%
Remittances received (% of GDP) (2023)	1.40%	5.40%
Economic Freedom Index ⁶ (Rank among 184 countries) (2025)		127
Poverty indicators		
GDP per capita (USD) (2023)	602	1,597

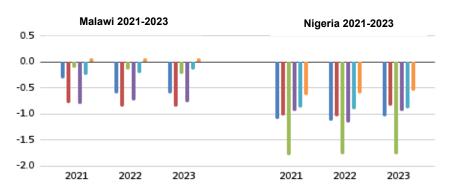
Multidimensional poverty index chart⁷



Malawi & Nigeria 2024 Percentage of the Population who are MPI Poor and Deprived (Nutrition indicator not available for Nigeria)

Governance indicators charts8





Financial sector context

Malawi - The National Strategy for Financial Inclusion (NSFI) 2016-2020 aimed to develop an inclusive financial system by increasing the financial and investment capacity of the private sector across both urban and rural areas, while promoting innovation in the financial industry. Notably, Section 8.3.2(iii) of the strategy underscored the critical role of inclusive insurance, a focus that remains a government priority.9 This commitment continues under Strategy 1 of the

¹U.S. Agency for International Development (2021). Malawi: Nutrition profile. https://web.archive.org/web/20240930061600/https://www.usaid.gov/sites/default/files/2022-

^{05/}Copy_of_tagged_Malawi-Nutrition-Profile.pdf. 2United Nations Malawi. Integrated Food Security Phase Classification (2022). Malawi chronic food insecurity snapshot. https://malawi.un.org/sites/default/files/2022-05/IPC%20Malawi%20Chronic%20Food%20Insecurity%20Snapshot%20-%20May%202022.pdf.

³Food and Agriculture Organization of the United Nations (2018). Country factsheet on small holder family farms: Nigeria. https://openknowledge.fao.org/handle/20.500.14283/i9930en.

⁴World Food Programme (2025). African Development Bank and World Food Programme support Nigerian Government in tackling acute hunger in Northeastern Nigeria.

https://www.wfp.org/news/african-development-bank-and-world-food-programme-support-nigerian-government-tackling-acute 5The World Bank Group (2025). World Development Indicators database. http://data.worldbank.org. Accessed 12 June 2025.

⁶Heritage Foundation (2025). Index of Economic Freedom. http://www.heritage.org/index/ranking. Accessed 12 June 2025.
⁷United Nations Development Programme (2024). 2024 Global Multidimensional Poverty Index (MPI): Poverty amid conflict. https://hdr.undp.org/content/2024-global-multidimensional-poverty-index-

mpi#/indicies/MPI. Accessed 12 June 2025.

8The World Bank Group (2025). Worldwide Governance Indicators database. http://data.worldbank.org. Accessed 12 June 2025.

⁹Ministry of Finance, Government of Malawi (2010). The Malawi National Strategy for Financial Inclusion (2010-2014). https://comesabusinesscouncil.org/wp-content/uploads/2020/04/2-National-Strategy-for-Financial-Inclusion-2010-2014.pdf



NSFI III for 2024-2028. 10 Malawi currently holds a Country Policy and Institutional Assessment (CPIA) financial sector rating of 3.5 on a scale of 1 to 6, indicating moderate strength in this area.¹¹

Nigeria - The Central Bank of Nigeria (CBN) adopted its NSFI in 2012, with a revised version launched in 2018. 12 The strategy reflects the government's deep commitment to improving financial inclusion, which it sees as 'accelerating economic growth and directly benefiting the poor.' CBN renewed its commitment via NSFI 3.0 for the 2021-2024 period. At the time of the review, insurance penetration remained low, with only 2% of Nigerian adults accessing insurance products. Nonetheless, the government set an ambitious target of 40% coverage by 2024 - drawing inspiration from South Africa's penetration rate of 36%. Nigeria currently holds a CPIA financial sector rating of 2.5.13

Financial Sector Partner/s

One Acre Fund's (1AF) mission is to serve small-scale farmers by providing them with the tools they need to grow themselves out of poverty. The organisation defines its success by the extent to which it enhances the prosperity of smallholder farmers, with a primary focus on low-income, rural, women-led farming households. 1AF grew its total scale to 5.5 million farmers in 2024, impacting 29 million family members in total.

One Acre Fund is a 501(c)(3) U.S. nonprofit and the largest insurance purchaser on behalf of smallholder farmers in Africa. Its branches include subsidiaries in Malawi and Nigeria. The One Acre Fund model bundles agricultural insurance with a suite of the following core services:

- Provision of quality farm inputs on credit, with flexible repayment throughout the growing season
- Farmer training in the latest climate-smart agricultural practices, as well as financial and digital inclusion
- Post-harvest support to help farmers maximize profits on harvest surplus

One Acre Fund partners with underwriters to offer a range of insurance products. In the 2025 season, CIC Insurance provided area yield index insurance in Malawi, while the Natural Disaster Fund (NDF) delivered water balance index insurance in both Malawi and Nigeria.

2. INTERVENTION APPROACH

Capacity building needs

One Acre Fund received a technical assistance grant from the U.S. International Development Finance Corporation (DFC) to improve the accuracy and value of its insurance products in Kenya, Rwanda, and Tanzania. Building on this work, the SBCF/Swiss Re Foundation intervention expanded this work to Malawi and Nigeria. The program specifically tackles a critical scaling challenge of securing external expertise in actuarial analysis, data science, and research on smallholder resilience.

Main activity areas (goals, targets, resources & time frame) and outputs

The primary objectives of One Acre Fund's Malawi and Nigeria projects were to improve the accuracy of its insurance product and extend parametric insurance coverage to 100,000 farmers in Malawi and 35,500 in Nigeria, including 12,750 and 35,500 first-time recipients, respectively. The project not only met but exceeded its targets in both countries during the 2025 season:14

Malawi

- A total of 142,036 farmers were insured, exceeding the target by 42%.
 - Of these, 93,775 (66%) were women.
- There were 49,194 first-time enrollments, nearly four times the original target.
 - Among first-time enrollees, 31,632 (64%) were women.

Nigeria

- A total of 77,758 farmers were insured, more than double the target.
 - Of these, 10,386 (13%) were women.
- First-time insured recipients numbered 42,632, surpassing the goal by 20%.
 - Among them, 6,800 (16%) were women.

To achieve these results, 1AF collaborated with Columbia University's International Research Institute for Climate and Society (IRI), which brought expertise in remote sensing, modeling, and research. Using 1AF's historical data on crop performance, farmer-reported damage, and resilience metrics combined with similar datasets from IRI, the partners developed a more precise and context-sensitive insurance index. In Malawi, the partners leveraged existing selfreported damage data from previous research. In Nigeria, data collection was initiated specifically for this project. The results were shared with insurance providers through a competitive tender process, to inform product design that better reflects farmers' actual experiences on their farms.

¹⁰Ministry of Finance, Government of Malawi (2024). The Malawi National Strategy for Financial Inclusion III (2024-2028). https://www.finance.gov.mw/phocadownload/National%20Strategy%20for%20Financial%20Inclusion%20III.pdf

¹¹ The World Bank Group (2024). CPIA Africa - Assessing Africa's Policies and Institutions. http://documents.worldbank.org/curated/en/099038507052414047
12 Central Bank of Nigeria (2018). National Financial Inclusion Strategy (Revised). https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf
13 The World Bank Group (2024). CPIA Africa - Assessing Africa's Policies and Institutions. http://documents.worldbank.org/curated/en/099038507052414047



The improvement in product accuracy was achieved through three main steps:

- 1. Data integration for index design: One Acre Fund merged multiple data sources including its own historical data on crop performance and farmer-reported damage with IRI's remote sensing and climate modeling expertise. This hybrid approach enabled the design of insurance products that better reflect farmers' real on-farm experiences. The findings were consolidated into a technical guide outlining key features of a more accurate, context-sensitive index.
- 2. Improved agro-ecological zoning and field validation: Internally, One Acre Fund refined its zoning by applying a K-Means clustering approach to datasets such as rainfall, rainfall anomalies, elevation, and enhanced vegetation index (EVI). These clusters were further adjusted using field-level insights. Field teams also collected in-season data including planting dates and crop loss observations which supported improvements to coverage periods and payout validation processes.
- 3. Market engagement and insurer alignment: The refined index designs were shared with insurers through a competitive tender process. In Malawi, this targeted hybrid products (combining water balance and area yield indices), while in Nigeria, where yield data is limited, the focus was on a pure water balance index. This process helped ensure that product design reflected local realities and fostered competition among insurers on both quality and pricing.

3. RESULTS ACHIEVED AND NOT ACHIEVED

Product Details

Feature	Malawi	Nigeria
Product Type	Hybrid (Water Balance Index + Area Yield)	Pure Weather Index
Index Components	Standardized Precipitation Evapotranspiration Index (SPEI), area yield index	Standardized Precipitation Evapotranspiration Index (SPEI),
Remote Sensing Data	ERA5 for precipitation and potential evapotranspiration estimates	ERA5 for precipitation and potential evapotranspiration estimates
Payout Triggers	SPEI daily trigger and exit thresholds based on crop growth period. Area Yield below 70% of historical average	SPEI daily trigger and exit thresholds based on crop growth period
Premium Rate	WBI: 15% AYI: 3%	WBI: 6.70%

Client level

1. Client Satisfaction

- Malawi Farmers endured challenges in two consecutive calendar years, with an extreme drought in 2024 caused by El Niño followed by an early-season drought in 2025. In response to the 2024 drought alone, One Acre Fund supported affected farmers through several phases of payouts, representing approximately 23% of the season's entire credit originally extended to farmers. According to reports from field teams in both years, the insurance coverage was well-received and built trust among farmers — particularly due to the timely and transparent claims process. While no formal satisfaction survey was conducted, strong renewal rates and consistent positive feedback from field officers suggest high levels of satisfaction with the product. In both the 2024 and 2025 seasons, payouts were released between two weeks and one month before the loan repayment deadline — a critical moment when farmers might otherwise need to resort to alternative means to repay their loans. Payouts were delivered in multiple forms: (1) As loan adjustments for farmers with outstanding balances, (2) As credit toward inputs for the following season for farmers who renewed, and (3) As cash payouts for farmers who exited the program. Cash payouts were also provided to participants in the resilience trial. Malawi's limited mobile payment infrastructure continues to present challenges for bulk payment processing. As a result, transparency was prioritized through strong communication with farmers. Field-level data was used to validate payout amounts, and farmers were supported in understanding both the amount they received and the reason behind it. Farmer awareness was driven by field officers, who had received training via a Training-of-Trainers (ToT) approach and maintained regular contact with clients throughout the process.
- Nigeria The farming community faced extreme drought in 2024 that impacted both subsistence and cash crops. Leveraging the improved index, a \$1.4 million payout was issued to support the affected 55,396 farmers. Loan adjustments were made in February 2025 to outstanding 2024 loans; while farmers who had already repaid their loans received discounts on their 2025 loans during Q2 2025. Feedback from field staff indicated that this payout was widely appreciated by farmers, many of whom were receiving crop insurance benefits for the first time. The tailored compensation structure comprising loan adjustments, future loan discounts, and vouchers was positively received.



2. Quality of Life

Loan discounts covered by insurance in both countries enabled farmers to access inputs for the new season at reduced prices. In addition, field teams reported the following:

- *Malawi* the early payouts in 2024 enabled farmers to replant, which helped to mitigate early-season losses, contributing to food security and income continuity.
- **Nigeria** the insurance payout helped farmers reduce debt burdens and the need to sell the drought-affected cash crops to meet loan repayment obligations.

3. Client Business Performance

Although a full impact study has not been conducted, early signs suggest that farmers were better positioned to reinvest in their farms for the 2025 season, with many renewing despite past season shocks, as detailed below. The discounts and input support through insurance-linked benefits contributed to improved input uptake, and this is expected to enhance productivity and yield stability over time.

Client Profiles





Grant Justin Gomani is a retired teacher and maize farmer in Malawi for whom the 2023–2024 planting season brought unexpected challenges. "We experienced El Niño, which caused a drought," Grant shares. "The harvest was heavily affected. It was a very big loss." In response, Grant was included in One Acre Fund's insurance payout. "Some of the money was used to buy food, and the rest helped me buy seeds that I planted," he explains.

Hannatu Thomas is one of the smallholder farmers in Nigeria supported by One Acre Fund's agricultural insurance program. "Since I started with One Acre Fund, I am standing on my own now," Hannatu shares. For Hannatu, the benefits of insurance include not only independence but also financial security. Since joining the program, she has been able to save enough money to buy a refrigerator and use it for additional income by opening a shop selling cold drinks.

Financial Sector Partner level

The SCBF intervention strengthened One Acre Fund's capacity in key areas related to client-focused insurance delivery, operational efficiency, and outreach. Below is a summary with relevant indicators:

1. Social Performance and Client Satisfaction

- Client Satisfaction Renewal rates serve as a reliable indicator of client satisfaction because they demonstrate farmers' willingness to continue investing in the insurance product, signaling their trust in its value. In Malawi, the renewal rate rose sharply to 91% in the 2025 season, up from 66% the previous year. Nigeria also saw a notable increase, with renewal rates climbing to 76% from 52%. In regions of Nigeria where insurance payouts were issued in 2024, renewal rates were even higher averaging 80% underscoring the positive impact of timely and meaningful coverage on client trust and retention.
- Outreach to Low-Income and Rural Clients The insurance products are rolled out to all One Acre Fund core
 clients who are smallholder farmers in both countries, resulting in a 100% coverage ratio. Effectively 100% of
 clients live in rural areas and fall within low-income brackets.
- Increased Technical Capacity The technical assistance enabled One Acre Fund to develop internal expertise in product design, payout validation, and improved client clustering. These advancements reduce long-term dependence on external InsurTech providers and enhance the sustainability of One Acre Fund's program. To further reinforce these capabilities, 1AF is recruiting an actuary to support these technical functions.
- Staffing and Operational Growth To effectively deliver insurance and related operations, and to manage an expanded research and data collection scope, One Acre Fund field teams have been trained to take on a more active role in insurance-related activities. This training and increased engagement has enhanced the 1AF team's



insurance literacy and communication skills, particularly among field officers, strengthening their capacity to deliver accurate and clear information.

2. Insurance Product Outreach and Portfolio Trends: 2025 Season¹⁴

Indicator	Malawi	Nigeria
Active Clients	1,42,036	77,758
Female Active Clients (%)	66%	13%
Active Clients in Rural Areas (%)	80%	70%
Lives Covered	1,50,910	98,132
Renewal Rate (%)	91%	76%
Policies	3	1
Product Type	Water Balance Index + Area Yield Index	Water Balance Index
Gross Premium	CHF 479,684	CHF 504,026
Total Value Paid Out in Claims	CHF 1,202,880	N/A (CHF 1,260,000 in 2024)
Number of Farmers who Received a Claim	1,10,637	N/A (55,396 in 2024)
Loss Ratio	250%	N/A (702% in 2024)
Total Sum Insured	CHF 11,318,146	CHF 7,487,285

3. Product Value and Service Quality

- Improved Index Design In addition to the technical assistance from IRI mentioned above, which improved index accuracy, One Acre Fund further strengthened its insurance product internally through refined zoning, advanced clustering techniques, and rigorous payout validation processes. Validation incorporated multiple data sources, including Normalized Difference Vegetation Index (NDVI), rainfall anomaly analysis, and direct farmer-reported loss data to ensure payouts closely reflected experiences with actual loss. Collectively, these efforts serve to increase One Acre Fund program's responsiveness to clients' changing conditions.
- **Flexible Cover Dates** In Nigeria, the 2025 season saw the introduction of flexible insurance start dates, allowing coverage to better align with farmers' real-world planting timelines, a key improvement based on feedback from the previous season.

4. Partnerships and Investment Mobilization

- New Partnerships One Acre Fund secured a contract with the World Food Programme (WFP) Malawi to advise
 on insurance product selection, manage the insurance process with providers on their behalf, and develop training
 materials. The partnership reflects One Acre Fund's organizational shift toward becoming a service provider
 beyond their core farmer base. Through this partnership, 1AF provided insurance coverage to 15,810 farmers
 under both the area yield and water balance index products. The water balance index triggered a total payout of
 \$144,000 due to early-season drought, and an additional payout of approximately \$27,000 is projected under the
 area yield component.
- Existing Partnerships 1AF has also continued their partnership with key players in the insurance industry, from intermediaries like Risk Shield and Global Parametrics, to insurers and regional and global reinsurers, who have consistently supported them in securing coverage.

Financial sector level

Following One Acre Fund's successful implementation of insurance advisory and management services under the WFP partnership described above, WFP has expressed interest in renewing the collaboration, contingent on available funding. The potential for continued partnership signifies a progression toward broader adoption of farmer-centered insurance solutions, reinforcing efforts to advance financial inclusion across the agricultural sector.

4. LESSONS LEARNT

One Acre Fund's SCBF/Swiss Re Foundation-co-funded intervention successfully improved smallholder access to improved, farmer-centered insurance products in Malawi and Nigeria. The intervention was largely implemented as planned, with the project design focused on refining existing products using farmer-informed data, enhanced remote sensing tools, and strengthened internal capacity:

The team at IRI brought valuable experience in collecting farmer insights and translating them into product design.
 Their turnaround time was strong, supported by automated tools.

¹⁴The season kicks off with planting in November of the previous year in Malawi, while in Nigeria, planting typically takes place from March to May



 One Acre Fund's field network also played a key role in ensuring smooth and efficient data collection, as reported above.

Challenges Faced

- Securing coverage and reinsurance: Even the most robustly designed index only delivers value when it is accepted by insurers and reinsurers, and coverage is formally secured. In Malawi, One Acre Fund faced challenges in securing coverage due to regulatory issues around foreign exchange, which discouraged international reinsurers from supporting locally underwritten policies. Additionally, 1AF's long-standing insurance partner scaled back its investment in agricultural insurance, following a challenging 2024 season. Despite these setbacks, One Acre Fund successfully secured coverage through a new insurer and a new, reputable panel of reinsurers
- Insurance structure in Nigeria and regulatory considerations: In Nigeria, One Acre Fund did not work with a local primary insurer during the pilot phase. Instead, the program used a derivative-based approach through the Natural Disaster Fund in the UK. This choice was driven by the lack of reliable partners and challenges typically encountered when onboarding new local insurers including delays in claims and payout processes seen in other countries. While this is not One Acre Fund's preferred model, it allowed for early product testing and building farmer trust. Moving forward, 1AF aims to transition toward working with local insurers as capacity and reliability improve. Regulatory constraints also impacted implementation. In Malawi, for instance, foreign exchange restrictions posed challenges to reinsurer engagement. Continued progress will depend on fostering better collaboration between implementing partners and regulatory bodies to align on timelines, documentation, and pricing transparency.
- Payout delays: During the 2024 season, delays in the approval and payment of area-yield payouts by the insurer
 and reinsurer prompted One Acre Fund to advance the payouts directly, ensuring timely support for farmers.
 Prolonged delays would have had serious consequences for farmer trust and livelihoods. While One Acre Fund
 is prepared with contingency plans again this year; the organisation does not anticipate similar delays, as the
 payout amount is smaller and it is now working with a new insurance partner.
- **First-time rollout in Nigeria:** Introducing the insurance program in Nigeria brought its own set of challenges. The product design process took longer than anticipated due to delays in accessing essential data, which subsequently extended the timeline for program teams to fully operationalize the program.

Price sensitivity and farmer perception of value:

- In Malawi, farmers have experienced multiple years of insurance payouts (including two large ones in the past two years), which has built strong trust and comfort in paying for insurance even without knowing exact premium amounts. By contrast, Nigeria was a first-time rollout, and insurance was not clearly communicated to farmers as part of the package. As a result, price sensitivity was more pronounced. One Acre Fund plans to strengthen farmer outreach and transparency, particularly in new markets, to improve uptake and perception of insurance.
- Additionally, One Acre Fund encourages careful consideration of subsidy rationale. In 1AF's view, subsidies should:
 - Support market development where affordability remains a barrier
 - o Enable higher coverage for vulnerable populations
 - o Serve as a bridge toward more sustainable pricing structures
- However, 1AF has also observed that poor targeting or reliance on inefficient intermediaries can dilute impact. A
 more effective approach may include optimizing underwriting structures, leveraging organizations like 1AF Re,
 and ensuring loss ratios justify premium support.

Achievement of Expected Outcomes

The intervention met or exceeded key expectations:

- Improved index design to best align with farmer experience. Severe droughts in both countries in 2024 were well covered by the improved products.
- The goal of reaching 100,000 farmers in Malawi and 35,500 in Nigeria was exceeded. As detailed above, in 2025 One Acre Fund reached 142,000 farmers in Malawi and 77,758 in Nigeria, achieving 142% and 219% of the respective targets.
- Value to external stakeholders is evidenced by WFP selecting One Acre Fund as technical partner for insurance product design and implementation.

What Could Have Been Done Differently:

Developing a deeper internal understanding of the underlying models used for the insurance products essential
to One Acre Fund's long-term ability to sustainably deliver insurance solutions to farmers directly. While One Acre
fund aimed to reduce their reliance on InsurTech partners more significantly during the project phase, it has made



meaningful progress. With the recent addition of actuarial expertise to its team, it is now well-positioned to further build its internal capacity and assume greater ownership of the product development.

What Worked Well:

- Adopting a human-centered design approach by collecting data on shock events and difficult seasons directly
 from farmers proved highly valuable. These insights ensured the products reflected farmers' actual experiences
 and significantly strengthened trust in the insurance offerings.
- Strategic investment in internal capacity was equally critical in complementing the work of external technical partners. Internal teams provided contextual understanding, which proved critical for agile decision-making, data validation, and corresponding product adjustments.

Recommendations for Future Interventions:

- Enhance internal capacity: Strengthening internal capacity is crucial to fully utilize the input and expertise of external partners. Equally important is providing early and comprehensive insurance literacy training to field teams, which facilitates smoother implementation and fosters stronger engagement with farmers from the outset.
- To sustain impact beyond the contract period:
 - Promoting open-source product development should be prioritized. This approach reduces long-term dependence on expensive brokers and InsurTech providers while fostering greater local ownership of product design and innovation.
 - Establishing clear long-term loss ratio targets within insurance partnerships is vital, with a commitment to monitor and act on them. While this was not an issue in this project's case due to strong payout performance, it remains critical for ensuring product value and client trust.
 - Continued subsidization may be necessary to maintain insurance accessibility and effectiveness for vulnerable households, recognizing their limited capacity to bear full costs.
 - Greater transparency in premium pricing is needed. In some cases, One Acre Fund lacked clarity on how much of the premium went to InsurTechs as broker commission. Advocacy for more open and standardized pricing structures by donors can help ensure fairer, more transparent markets.
 - Building trust in agricultural insurance products depends not only on strong design and payout performance, but also on clear and consistent farmer communication. While One Acre Fund has historically focused on product improvement and delivery, it is now scaling up efforts to engage directly with farmers on how insurance works, what it covers, and why it matters. A new communications team has been onboarded, with plans to hire 3-4 additional staff to lead farmer-facing outreach at scale. Early signs suggest that this investment will be critical for product sustainability and farmer satisfaction in the long term.