

**Executive Summary**

- African farmers reliant on rainfed agriculture are profoundly vulnerable to the effects of climate change, especially climate shocks like severe drought or flooding. A single season of extreme weather can erase years of assets and cause a backslide into poverty, especially affecting children and girls.
- Agricultural insurance can provide a safety net, but requires subsidization to be accessible and effective. Such subsidies are already the norm for farmers worldwide – yet in rural Africa, where subsidized crop insurance is most needed, it is least available. As a result, 97% of African farmers lack coverage.
- One Acre Fund has the farmer network, track record of impact, and insurance expertise to fill this market gap and provide subsidized crop insurance to smallholders across Africa.

**I. Agricultural insurance can provide a vital safety net for Sub-Saharan Africa's smallholder farmers***A. Smallholder farmers in Africa are uniquely vulnerable to short-term climate shocks*

Over 75% of all adults living in extreme poverty and hunger in Sub-Saharan Africa are smallholder farmers.<sup>1,2</sup> Already living on the margin of subsistence, most rely on rainfed agriculture, leaving them vulnerable to the effects of climate change such as long-term shifts in rainfall patterns, temperature levels, and pest/disease cycles.<sup>3</sup> More urgently, African farmers are also threatened by short-term climate shocks such as severe droughts or flooding, which can decimate annual harvests.<sup>4</sup> These erratic weather conditions are already becoming more common – for example, hurricanes in 2023 and El Niño in 2024 impacted food security for millions of farmers across Africa.<sup>5</sup>

*B. Climate shocks can push farmers into a poverty trap with devastating long-term consequences*

In the current status quo, African smallholder farmers have few safety nets to protect against climate shocks. Due to their poverty, small land size, and remote location, most lack access to any form of agricultural insurance.<sup>6</sup> Most also are not protected by any kind of governmental safety net; even when these services exist, they are stretched too thin during extreme weather seasons. This means most rural households have limited options for coping with lost harvests. They can rely on savings or other income sources, or borrow from community members or informal lenders<sup>7</sup> – however, when these options are exhausted many farm families are forced to undergo a “hunger season” of meal-skipping.<sup>8</sup>

Moreover, without safety nets, a single season of climate-driven yield loss can cause multiple years of harm. Farmers often have to sell accumulated assets, borrow at high interest rates, or withdraw their children from school. A recent study in Ghana found that 94% of farm households responded to harvest failures by selling livestock or other assets.<sup>9</sup> For farmers working to build assets and improve their annual crop production, one severe climate shock can erase years of gains and cause a backslide into extreme poverty – or actually reduce their long-term productive capacity. These impacts are greatest for the poorest farmers.<sup>10</sup>

---

<sup>1</sup> [Ritchie 2022](#)

<sup>2</sup> [Morton 2007](#)

<sup>3</sup> [International Finance Corporation 2023](#)

<sup>4</sup> [Ranganathan et al 2018](#)

<sup>5</sup> [Nasa Earth Observatory 2024](#)

<sup>6</sup> [Fitritia & Matsuyuki 2023](#)

<sup>7</sup> [Ceballos & Robles 2014](#)

<sup>8</sup> [Nonterah et al 2022](#)

<sup>9</sup> [Boansi et al 2023](#)

<sup>10</sup> [FAO 2015](#)

This harm disproportionately affects children, especially girls. In addition to being pulled out of school, children may be forced into agricultural or domestic labor. In these roles, girls are particularly vulnerable to harm and abuse, and in the worst cases this may lead to bonded labor and prostitution.<sup>11</sup>

### *C. Agricultural insurance increases resilience to shocks and helps farmers build pathways out of poverty*

Crop insurance is a proven method for smallholder farmers to achieve resilience against climate shocks.<sup>12,13,14</sup> In addition to providing a safety net against harvest loss, insurance also results in other positive outcomes:

- Insurance coverage both reduces risk aversion and incentivizes new investments in productive capacity. For example, research in Ethiopia found that weather insurance made farmers 50% less risk-averse<sup>15</sup> and drove greater investment in farm inputs.<sup>16</sup> Research in Ghana similarly found that insured smallholders made larger investments in their farms.<sup>17</sup> Another study found that insurance increased the likelihood of shifting production towards riskier but higher-value cash crops.<sup>18</sup>
- Insurance also directly reduces the knock-on consequences of climate shocks. For example, coverage leads to significantly lower outstanding debt and a fourfold increase in household members completing age-appropriate education.<sup>19,20</sup>
- Overall, there is strong evidence that agricultural insurance helps smallholders build pathways out of poverty.<sup>21</sup>

## **II. Subsidies are necessary for agricultural insurance to be widely accessible and effective**

### *A. Modern crop insurance requires subsidization – shown by the ubiquity of subsidies in most global regions*

Agricultural insurance is expensive due to high demand and low supply. Demand is high because farmers know the importance of insurance, given the high risk and slim margins of their profession – as in Sub-Saharan Africa, one or two failed harvests can risk ruining a farm. Supply is low because providers must be sufficiently large and liquid to pay out many claims at once since a single poor weather season affects all farmers – the insurers' own risk is undiversified.

Given these factors, governments worldwide have stepped in to incentivize and de-risk domestic agriculture by providing crop insurance subsidies. These subsidies are now ubiquitous in most global regions, including the Americas, Europe, and Asia<sup>22</sup> – in fact, China and India have made subsidized insurance compulsory for all farmers, including smallholders.<sup>23,24</sup> In the United States and Canada, governments provide support for an average of 73% of agricultural insurance premiums; in China, Japan, and India, government subsidies cover up to 50% of premiums.<sup>25</sup>

---

<sup>11</sup> [Stavropoulou & Jones 2013](#)

<sup>12</sup> [Gebretsadik & Tesfay 2023](#)

<sup>13</sup> [Isaboke et al 2016](#)

<sup>14</sup> [Barrett et al 2023](#)

<sup>15</sup> [Haile et al 2020](#)

<sup>16</sup> [Gebrehiwot 2015](#)

<sup>17</sup> [Karlán et al 2014](#)

<sup>18</sup> [Cole et al 2014](#)

<sup>19</sup> [Cariappa et al 2020](#)

<sup>20</sup> [Barrett et al 2023](#)

<sup>21</sup> [Timu & Kramer 2023](#)

<sup>22</sup> [Smith & Glauber 2012](#)

<sup>23</sup> [Kramer et al 2022](#)

<sup>24</sup> [Clarke et al 2012](#)

<sup>25</sup> [Rattani 2016](#)

These subsidies have been directly responsible for the growing global adoption of crop insurance. Coverage rates are highest in countries that have large national subsidized schemes;<sup>26</sup> in countries without such subsidies, agricultural insurance markets remain small-scale with low adoption.<sup>27</sup> Taking the United States as an example:<sup>28</sup>

- The 1980 Crop Insurance Act subsidized up to 30% of premiums. At this time, participation in the agricultural insurance market averaged slightly over 20%.
- The 1994 Crop Insurance Reform Act increased subsidies to around 40%, leading to an increase in the participation rate to 50- 60%.
- In 2000, subsidies were further increased to 60%, raising participation rates to 80-85%.

### *B. Africa alone lacks widespread crop insurance subsidies, doubly disadvantaging its farmers*

Sub-Saharan Africa is the sole global region without subsidized agricultural insurance widely available to farmers. On average, government subsidies cover just 3% of insurance premiums in Africa.<sup>29</sup>

As a result, Africa has by far the world's lowest rate of agricultural insurance adoption. As of 2014, out of 198 million farmers insured worldwide, only about 650,000 were in Africa.<sup>30</sup> In 2016, 99% of African smallholders were uninsured;<sup>31</sup> in 2023, 97% of farmers in Africa still lacked coverage.<sup>32</sup> This low rate is directly attributable to a lack of subsidies – for example, a trial program in Ethiopia found that 39% of surveyed farmers opted to newly adopt crop insurance when subsidized, but adoption declined again when the subsidy was removed.<sup>33</sup>

This global disparity disadvantages African farmers living in extreme poverty:

- As one of the poorest populations on the planet, they are already less able to afford crop insurance (including due to a lack of cash on hand for upfront premium payments<sup>34</sup>), and the lack of subsidies puts coverage even further out of reach
- As one of the most climate-vulnerable populations on the planet – reliant on rainfed subsistence agriculture with little access to irrigation or other resilience services/technologies – the lack of any safety net is even more consequential
- Meanwhile, subsidized coverage enables farmers in other regions to confidently invest in achieving larger yields at lower costs, making it harder for Africans to compete in global markets

### *C. It is a moral imperative to extend subsidized crop insurance to African smallholder farmers*

It is clear that African smallholders require crop insurance, and that this in turn requires insurance subsidies. Without subsidies, these farmers will remain the global population most in need of agricultural insurance yet least able to access coverage. Subsidies offer a clear and necessary path forward to mass-scale coverage, already proven across every other global region.

This is also an issue of climate justice. Sub-Saharan Africa (excluding South Africa) was responsible for 0.6% of cumulative global carbon emissions between 1750 and 2021, despite being home to 14% of the world's population.<sup>35</sup> Yet this will be the single global region most negatively impacted by climate change; the

<sup>26</sup> [Rattani 2016](#)

<sup>27</sup> [Cole & Xiong 2017](#)

<sup>28</sup> [Smith & Glauber 2012](#)

<sup>29</sup> [Rattani 2016](#)

<sup>30</sup> [Hess & Hazell 2016](#)

<sup>31</sup> [Jimenez-Sanchez 2023](#)

<sup>32</sup> [African Development Bank Group 2023](#)

<sup>33</sup> [Ahmed et al 2020](#)

<sup>34</sup> [Casaburi & Willis 2018](#)

<sup>35</sup> [Ritchie 2023](#)

University of Notre Dame's ranking of most climate-vulnerable nations includes 18 African countries in the top 25.<sup>36</sup> Even within the Sub-Saharan context, smallholder farmers are comparatively the population least responsible for, yet most vulnerable to, climate change – yet without insurance subsidies, they have no way of affording adequate protection.

There is no reliable and replicable pathway out of poverty for African smallholders without subsidized crop insurance. Consider the comparison of two individuals facing the same extreme drought conditions:

- An American maize farmer has purchased extensive crop insurance, made affordable by high government subsidies. She is also less vulnerable due to drought-resistant seed and irrigation options. Her farm experiences a 20% decrease in yield, for which she receives compensation, ensuring financial stability and operational continuity.
- A Malawian maize farmer cannot afford unsubsidized crop insurance. Reliant on rainfall and lacking access to other climate resilience measures, she experiences an 80% decrease in yield. To feed her family, she must empty her savings, accumulated through years of hard work and intended to pay for her children's school fees – and even so, her family faces months of meal-skipping until the next harvest.

### III. One Acre Fund is best positioned to design and administer subsidized crop insurance across rural Africa

#### A. One Acre Fund represents Africa's largest farmer network, with a track record of cost-effective impact

One Acre Fund is the world's leading organization serving African smallholder farmers. We operate in nine countries home to two-thirds of the continent's farm families: Kenya, Rwanda, Burundi, Malawi, Nigeria, Uganda, Ethiopia, Tanzania, and Zambia. We directly serve 1.6 million farm households each year with a holistic "market bundle" of microcredit, farm inputs, delivery, training, and post-harvest support; we also reach 3.2 million additional farmers annually through partnerships with other actors. This represents Africa's largest network of smallholders – made possible through the hard work of our 8,700+ full-time staff, over 99% of whom are African, most living and working alongside the farmers we serve.

Additionally, One Acre Fund has a track record of cost-effective impact, backed by rigorous evaluations. In every country and every season, we physically weigh the harvests of tens of thousands of clients and statistically comparable non-client farmers, then use market price and cost data to calculate farmer profits. This process is conducted by dedicated Monitoring, Evaluation, and Learning teams across all nine countries, and results are repeatedly validated by external randomized control trials. In 2023, our core model enabled farmers to achieve an average of \$143 in new profits and assets on supported land – representing \$3.86 in incremental farmer income for each \$1 in donor funding contributed to our direct-service program.

#### B. One Acre Fund is already a major actor in smallholder crop insurance and is poised for further growth

One Acre Fund is already one of the largest distributors of agricultural insurance on behalf of smallholders in Sub-Saharan Africa. In 2023, we provided basic yield-indexed insurance to 1.2 million farmers, covering the cost of farm inputs in the case of weather-driven yield shortfalls. This low-cost coverage helped de-risk farmer investment in higher-quality inputs, and in some cases allowed farmers to replant fields affected by flooding – but did not provide compensation for lost harvests.

We now seek to expand on this foundation and provide meaningful subsidized crop insurance for smallholders across the continent. Multiple factors make One Acre Fund ideally positioned to do so:

---

<sup>36</sup> [Notre Dame Global Adaptation Initiative 2021](#)

- As described above, we already have a leading network of rural farmers and field staff and experience in providing them with crop insurance. Research has shown that trust in the insurance provider is key for successful uptake in high-poverty contexts.<sup>37</sup>
- We also have a strong MEL function, including more than a decade of high-quality yield data spanning hundreds of thousands of farms. Historically, the absence of quality data has been a major limitation to providing affordable insurance to smallholders.<sup>38</sup>
- Lastly, we are already building the expertise, partners, and resources required for this ambitious vision. One Acre Fund recently announced a first-of-its-kind reinsurance fund, One Acre Fund Re, in partnership with the IFC, DFC, and African Risk Capacity. Through this new fund, we plan to offer farmers a deeper level of coverage, made affordable through subsidized premiums, all designed explicitly to protect against the climate shocks faced by Africa's most vulnerable smallholders.<sup>39</sup>

### *C. Case Study: How One Acre Fund's subsidized insurance helped farmers cope with El Niño in Zambia*

Zambia experienced a severe El Niño event in late 2023, leading to one of the worst droughts in the country's history. One Acre Fund was prepared and started planning mitigation strategies as early as May 2023. We undertook overlapping actions to safeguard the livelihoods of our clients, including early communications about risks and adaptation strategies, incentivizing the adoption of early-maturing seed for maize and cowpeas, and equipping farmers to plant trees that help regulate soil moisture.

The cornerstone of our farmer resilience support in Zambia was subsidized crop insurance. Based on projected weather patterns, we pivoted from our standard yield-based insurance (for which payouts cannot be made until final harvest data is available) to weather-indexed insurance (for which payouts can be made based on weather data gathered during the season) and purchased a higher level of coverage. We used a portion of weather-indexed payouts to purchase and deliver a new batch of seed to farmers whose initial planting was not viable due to weather conditions, enabling them to re-plant in early 2024, in time to ensure a seasonal harvest. The remaining payout value was passed directly back to farmers, via partial loan forgiveness to all clients and discounted inputs for both new and returning clients the following season. Overall, this subsidized coverage both averted harvest loss and reduced financial pressure on families during and after a challenging season.

### **Conclusion**

Subsidizing agricultural insurance for smallholder farmers in Sub-Saharan Africa is a critical step towards achieving climate justice and sustainable development. These farmers contribute the least to climate change yet suffer its most severe impacts. They require robust safety nets to break the cycle of poverty and food insecurity. Making insurance affordable and accessible through subsidies can foster resilience, encourage investments in higher-yield crops, and ultimately improve livelihoods. By prioritizing subsidized agricultural insurance, we can ensure that smallholder farmers have the protection they need to thrive in an increasingly unpredictable climate.

---

<sup>37</sup> [Matul et al 2013](#)

<sup>38</sup> [Ceballos & Robles 2014](#)

<sup>39</sup> [McGuinness et al 2023](#)