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Disaster Risk Financing in Fragile Contexts

Syria Case Study

By Noam Unger and Madeleine McLean

Introduction

As extreme weather events increase in severity and frequency, the world faces compounding economic and development challenges. Conflict affects over **half** of the 25 countries most vulnerable to climate change. When disaster strikes in these contexts, the mortality rate can be up to **34 percent** higher than in non-fragile states. International humanitarian aid organizations have sought to fill the crisis funding gap in these contexts, as most fragile state governments do not have the capacity on their own. Yet aid budgets are shrinking. With hazards growing and response capabilities receding, innovative disaster risk financing (DRF) mechanisms, particularly anticipatory action and parametric insurance solutions, present significant opportunities to help manage extreme weather risks and unlock capital to contend with disasters.

DRF is more efficient and less dependent on unpredictable donor support for vulnerable communities. One **example** from the UN World Food Programme showed (WFP) that early response efforts funded by the African Risk Capacity (ARC) Replica payouts in Mali could result in approximately 20 percent cost savings in drought years, with affected communities able to spend funds more efficiently because they received them more rapidly. Similarly, sovereign insurance works as a budget stabilizer for governments and provides fast cash to fund their response, ultimately working to **shorten** recovery times. However, fragile states often lack the ability to insure themselves, and even if the in-country technical and financial capacity exists, local insurers face obstacles to accessing global reinsurance markets due to international sanctions and investor skepticism. As foreign assistance budgets shrink around the world, international humanitarian aid organizations are experimenting with insurance-based solutions to ensure they have the funds they need to respond to crises.

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Recognizing the value of better preparedness in fragile states, the WFP, in partnership with the Global Shield Financing Facility, Humanity Insured, and the Insurance Development Forum's Sovereign and Humanitarian Solutions Working Group, piloted the first macro-level **parametric drought insurance product** in Syria to support the WFP's response to severe drought from January to mid-April 2025 in the north, northeast and south. Ultimately, the $1.25 million policy resulted in a payout of approximately $7.9 million.

This paper seeks to unpack the development, challenges, and successes of the WFP's parametric drought insurance product in Syria. The analysis is informed by a private roundtable discussion hosted by the CSIS **Sustainable Development and Resilience Initiative** in July 2025, which brought together representatives from government and the public, private, and nonprofit sectors to discuss the WFP parametric drought insurance product in Syria, as well as the implementation of other innovative DRF mechanisms in fragile and humanitarian crisis contexts.

Why Syria?

The idea for the WFP's parametric drought insurance for Syria did not start with Syria; it started with the need to more rapidly access funding for disasters in fragile states and the notion that the WFP could insure its own response to achieve this goal. The WFP has worked to scale up its macro-level insurance portfolio since 2017, recognizing the value of parametric insurance in quickly generating additional resources. However, its early portfolio focused on countries associated with regional risk pools—specifically ARC and the Caribbean Catastrophe Risk Insurance Facility—which effectively excluded some of the most vulnerable countries from accessing these products.

With initial support from the Global Shield Financing Facility, the WFP began developing a parametric macro-insurance product that did not fall within the purview of a regional risk pool. Consultations with the WFP country offices identified Syria as a potential pilot location for this product, given Syria's extreme fragility and the WFP in-country office's capacity.

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Syria has been engulfed in a protracted civil war since 2011, displacing millions of people and causing widespread suffering. Former President Bashar al-Assad's government was overthrown in late 2024, and the interim government has faced significant **challenges** since coming to power, including exacerbated economic conditions, continued security concerns, and the **need to rebuild** state institutions. In

addition, the cost of living has tripled, worsening food insecurity. Extreme weather events have compounded these challenges. Given this backdrop of fragility, the WFP's in-country office has developed the capacity and skills required to scale up quickly in response to shocks. This means that, should a payout occur, the office can facilitate the quick disbursement of funds to the communities it supports to cover their essential needs after a drought.

The WFP was also forced to reduce its continuous programming in Syria by approximately **80 percent** in 2024 due to declining donor support and rising food costs compared to 2023. While insurance cannot fill the gap that diminished donor support has created for these programs, it enables the WFP to respond quickly and efficiently in a crisis that meets predefined triggers.

The Insurance Product and Its Payout

Swiss Re designed the Syrian parametric drought insurance product in its capacity as a member of the Insurance Development Forum. The aim was to de-risk the WFP's emergency response in the case of severe drought, which the WFP country office identified as the most significant risk to food security in Syria. Drought is challenging to identify and respond to in fragile contexts because quality data is often lacking and because media attention and donor support are often drawn to flashier issues related to violent conflict. For organizations such as the WFP that depend on donor support to respond to crises, parametric or trigger-based insurance policies can play an enabling role to secure emergency funds, regardless of international attention.

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With support from the UK Foreign, Commonwealth, and Development Office and the German Federal Ministry for Economic Cooperation and Development, the Global Shield Financing Facility and Humanity Insured paid for the policy's **$1.25 million** premium. The premium enabled coverage for 240,000 people in Syria and up to approximately **$9.25 million** in response funding.

The model used the normalized difference vegetation index (NDVI) to determine drought conditions using satellite images, in addition to on-the-ground monitoring, covering the north, northeast, and south from January to mid-April 2025. Outlined in the prearranged operational plan, the payout, proportional to the severity of drought measured, took the form of emergency cash assistance directly to food-insecure or displaced families, beginning within 90 days of payout confirmation, to cover the costs of food, healthcare, school, and other expenses families might not be able to afford because of the failed harvest.

Throughout the policy life cycle, the WFP and Swiss Re monitored the NDVI weekly. The season started with normally low rainfall levels, but as it progressed, drought began to develop. Over the course of the monitored period, rainfall measured 54 percent below average, **40 percent** of livestock perished, and wheat production dropped by **2.7 million** metric tons. Based on this monitoring and on-the-ground observations, the WFP concluded that Syria had experienced a once-in-50-years drought, resulting in a payout of **$7.9 million** to provide cash assistance to approximately 117,000 people.

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The WFP—after reviewing the drought levels with Swiss Re and the policy's broker, insurer, and reinsurer—determined that two of the regions where the maximum payout was triggered would receive monthly cash transfers of $100 for three months; the third region would receive monthly cash transfers of $100 for two months. Targeting and household verification began in mid-June, following consultation with government counterparts, local authorities, and community leaders to identify the hardest-hit communities. Payouts were expected to begin in August.[1]

Challenges

The insurance product was a success, as it allowed the WFP to access funds more quickly than through traditional donor support. But operating in fragile contexts is not without its challenges. In fragile settings, emergency responses are often stymied by circumscribed observation data, rapidly shifting security landscapes, and market accessibility constraints. Throughout the product design process, the WFP **identified** (1) the potential for cloud cover to impede satellite imagery and (2) inaccurate demographic figures as the primary challenges to its efforts to implement a parametric drought insurance policy. These challenges were overcome by using composite images taken over several days; population-based weighting to determine location-bound payout amounts, as well as when the payouts are triggered; and working with local governments to identify the most vulnerable communities to ensure their inclusion. In addition, limited historical yield data made it difficult to compare drought conditions across certain years, but the WFP acknowledged this gap without undermining the overall accuracy of the approach.

The challenge the WFP did not foresee, however, was the **hard currency shortage** Syria currently faces, restricting the WFP's ability to provide cash assistance. Despite a detailed accounting of potential risks during the design process, the WFP did not anticipate this challenge, highlighting the need for adaptability. At the time of writing, the WFP was in the process of working through this issue and expected only slight delays in its ability to distribute the cash assistance.

Opportunities to Scale Up

The parametric drought insurance policy for Syria was a proof of concept, and it worked. In the face of a once-in-50-years drought, the WFP was able to quickly gain access to funding to provide lifesaving cash assistance to vulnerable communities across Syria's northern, northeastern, and southern regions. This case demonstrates how parametric insurance quickly unlocks additional capital in the face of devastating events. The fact that the WFP received the maximum payout in two of the three regions covered speaks to the severe risks extreme weather events pose in fragile contexts and illustrates the role insurance plays in enabling additional recovery and resilience funds.

1 Authors' notes from a CSIS roundtable discussion on July 29, 2025.

Moreover, lessons associated with cash payout hurdles can inform the application of such insurance policies in other conflict-affected settings.

By showing that it is possible to effectively implement parametric insurance coverage in a fragile context, the array of organizations that supported this pilot have contributed solid evidence and experience that can support efforts to scale up insurance coverage in similar contexts. NDVI data is available globally, meaning that the technical foundation for drought modeling exists across regions. The choice of index, however, must be tailored to each country's climatic context, including such factors as irrigation prevalence, crop distribution, and data reliability. With thoughtful customization, parametric insurance can be extended to other regions, supporting more sustainable and resilient risk financing systems. Generalizing the product across disasters and continents could work to reduce financial volatility as well, ultimately making such insurance more sustainable from a market standpoint.

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Conclusion

Insurance can be used as a budget stabilizing tool for international humanitarian response, meaning that when a crisis occurs, money can be quickly and predictably accessed to fund lifesaving programming. The WFP's parametric drought insurance for Syria represents an important supporting case. Catastrophic insurance, however, is no magic bullet. Structured properly, it will not result in regular payouts each year; there are many levels of damage that insurance cannot cover, despite necessitating recovery and resilience efforts. Insurance should be combined with other alternative financing mechanisms so that, even if a disaster does not meet predefined triggers, affected communities receive the help they need.

In the first few months of 2025, Syria experienced a twice-in-a-century drought. It was through innovative DRF that the WFP could mobilize the funds needed to respond. Emily Jones, a program policy officer with the WFP's climate risk financing team, noted in her remarks at the CSIS roundtable held in July 2025 that the "payout came not because of media headlines or political priorities, but because of objective climate-based triggers. For [the WFP], that is the real power of parametric insurance in fragile states."[2] ■

2 Authors' notes from a CSIS roundtable discussion on July 29, 2025. Printed with the authors' permission.

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