

Excerpt from

# Landscape of Anticipatory Action for Health in a Changing Climate

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## Drought and nutrition

Hazard-focused Anticipatory Action (AA) plans that focus on drought often seek to mitigate or avoid negative impacts to nutrition and food security. The following information provides evidence on health outcomes of AA for drought along with examples of an AA framework in Colombia led by FAO, using the 4Ms (Model, Mandate, Method, Means) framework. It also highlights the unique approach of the Africa Risk Capacity (ARC) initiative as an example of government-led AA, as well as humanitarian and government collaboration through the ARC Replica scheme.

### Evidence review

Many AA frameworks for drought focus on livelihood protection, especially for people who work in agriculture and pastoralism. Index insurance programs provide low-cost insurance for drought events, although national-level insurance is likely only cost-effective when forecasts are highly accurate (Anand et al. 2024). Malnutrition is a key health outcome of concern, due to limited earnings and low purchasing power during drought or limited food supply for subsistence farmers/herders.

The most recommended approach for AA for malnutrition is to establish surge capacity in health systems, preparing the system to scale up rapidly to

meet increased demand in the event of a drought. In countries with stable governments and operational public health services, surge capacity consists of plans to be able to increase staff at health centers in the event of a drought forecast, the ability to speed up supplies through existing pipelines, and initiation of community screening to identify malnourished children.

Surge capacity is often designed as part of shock-responsive social safety net plans, which can also provide cash transfers to affected populations. However, cash transfers might need to be supplemented by other nutrition interventions, because specific products for supporting malnourished children (e.g., therapeutic food) are not readily available on the market. Experts recommend using drought early warning information to begin to scale up early, because once negative outcomes have already set in, cash transfers will be used to try to catch up with lost consumption, and the health and nutrition services will need to play catch-up with a caseload of malnourished children.

One example of such a program is the Community-based Management of Acute Malnutrition (CMAM) Surge approach in Kenya, which included information systems to monitor health system capacity against seasonal risk information, flexibility in product distribution systems, and enabling health

workers to manage spikes in caseloads (Fortnam et al. 2021). Government ownership was seen to be key to the success and sustainability of this program; the Kenyan Ministry of Health designed the CMAM Surge program nationally. However, sufficient government financing has been a challenge, and United Nations and NGO partners have been critical in supporting the financing and implementation of these programs (Fortnam et al. 2021).

### Example of high-potential design

**Model:** Seasonal forecasts of crop failure or reservoir levels provided by regional forecasting agencies based on their long-term rainfall observations and forecasts.

**Mandate:** Government-led initiatives to manage widespread drought effects through social protection systems and complemented by humanitarian assistance.

**Method:** Cash transfers to replace lost income, scale-up of health system staffing and supply chains, proactive community screening for malnutrition. Support for livelihoods, if possible.

**Means:** Government funding, with top-up from humanitarian assistance funds.

### Case study: FAO in Colombia

FAO Colombia began its work on Anticipatory Action (AA) with a pilot initiative implemented between 2018 and 2019. Since 2021, these efforts have evolved into a more robust and institutionalized approach to climate-related hazards such as El Niño, La Niña, and tropical cyclones. In coordination with the Ministry of Agriculture and Rural Development, FAO has made significant efforts to strengthen national and local capacities to act before disasters strike, thereby reducing risks to livelihoods and food security. To guide its efforts for the period 2024–2027, FAO Colombia has adopted a strategic roadmap for AA. This framework prioritizes strengthened coordination with UN system entities, the Red Cross Movement, and nongovernmental organizations, looking for a more integrated response to climate-related risks. At the national level, it seeks to embed the approach within government systems to facilitate greater ownership, policy alignment, and scalability. Simultaneously, the roadmap emphasizes capacity building at the local level, working with social

organizations, academic institutions, producer groups, smallholder farmers, and ethnic communities to enhance preparedness and resilience across Colombia (FAO 2024a).

From July 2023 to February 2024, in response to the declaration of the El Niño emergency, FAO implemented AAs in La Guajira and El Cesar, two departments of the Colombian Caribbean region mainly inhabited by indigenous communities. AAs were centered on the protection of agricultural livelihoods.

**Model:** In May 2023, the National Oceanic and Atmospheric Administration (NOAA) reported a 90% probability of the occurrence of the El Niño phenomenon. FAO used this forecast as a trigger to initiate a preparedness plan in close collaboration with the Ministry of Agriculture and Rural Development. The plan incorporated four key components: “(i) identification of months with the lowest expected precipitation in the prioritized areas; (ii) analysis of sowing and harvest calendars for the region’s principal crops; (iii) projections of drought impacts by month; and (iv) continuous monitoring of precipitation anomalies, calculated as the difference between predicted and historical climatological values, expressed in millimeters for each territory” (FAO 2024b, 3). In addition to data from international meteorological centers such as NOAA, FAO also relied on weekly and monthly alerts issued by the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM), as well as data produced by FAO’s team of meteorologists. The official declaration of El Niño in Colombia occurred in November 2023; by that time, FAO had already activated its action plan.

**Mandate:** FAO implemented the initiative in close collaboration with the Ministry of Agriculture and Rural Development, the Colombian Agricultural Institute (ICA), the National Unit for Disaster Risk Management (UNGRD), and local authorities. With support from the UNGRD and the national army, for example, agricultural inputs and construction materials for water supply systems were delivered to all targeted municipalities. Additionally, animal health brigades were established in coordination with ICA.

**Method:** In the livestock sector, approximately USD 334,000<sup>5</sup> was allocated to protect 38,312

<sup>5</sup> The original source has this information in Colombian pesos. To present it in dollars, we used the average exchange rate for 1 US dollar for 2024, which was 4,073 Colombian pesos.

sheep and goats through the provision of feed concentrate, silage production, veterinary supplies, animal health and nutrition campaigns, technical assistance, and the training of community livestock promoters. These measures improved animal weight, reduced mortality, prevented diseases, enhanced reproduction, and increased milk and meat production, despite ongoing water shortages. In the water sector, USD 182.93 was invested in the rehabilitation and/or construction of 35 community water supply systems, benefiting approximately 20,000 people. Each system ensured a daily supply of 16 cubic meters of water, amounting to 204,400 m<sup>5</sup> annually across all communities. These renewable energy-powered systems were designed for a three-year lifespan, with community members trained in its maintenance. In the agricultural sector, between July and November 2024, USD 245.00 was invested to deliver 840 tons of agricultural inputs to 35 communities. Support included drip and

microirrigation systems, drought-resistant traditional seeds, tools, materials for infrastructure, organic fertilizers, and water-retaining products (FAO 2024b).

**Means:** These initiatives were made possible through the support of the German government (GFFO), via the Special Fund for Emergency and Rehabilitation Activities–Anticipatory Action Window, with a contribution of USD 1 million. An important enabling factor was FAO’s long-standing presence in Colombia and its sustained investment in building strong collaborations with local government entities. This prior engagement and the organization’s established partnerships facilitated the effective identification of target areas for intervention.

An example of a novel AA program can be found in Box 10, where the African Risk Capacity insurance model is explained.

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### **BOX 10.** Snapshot: African Risk Capacity

One example of a novel approach to Anticipatory Action (AA) for drought is African Risk Capacity (ARC), which provides sovereign drought insurance for national governments in Africa.

**Model:** This insurance pays out when a crop model indicates that the most recent season’s rainfall was not adequate for a good harvest. The timing of the payout is designed to enable immediate action by African governments in responding to people’s needs, and ARC has also developed a forecast-based trigger that would pay out even earlier in the season based on a forecasted crop failure.

**Mandate:** National governments hold the insurance policies of ARC, and these governments therefore receive the payouts and are responsible for implementing the predetermined action plans. ARC Replica coverage has been offered to nongovernmental actors, and several UN agencies and NGOs have purchased these Replica products in order to also receive a payout at the same time as the government.

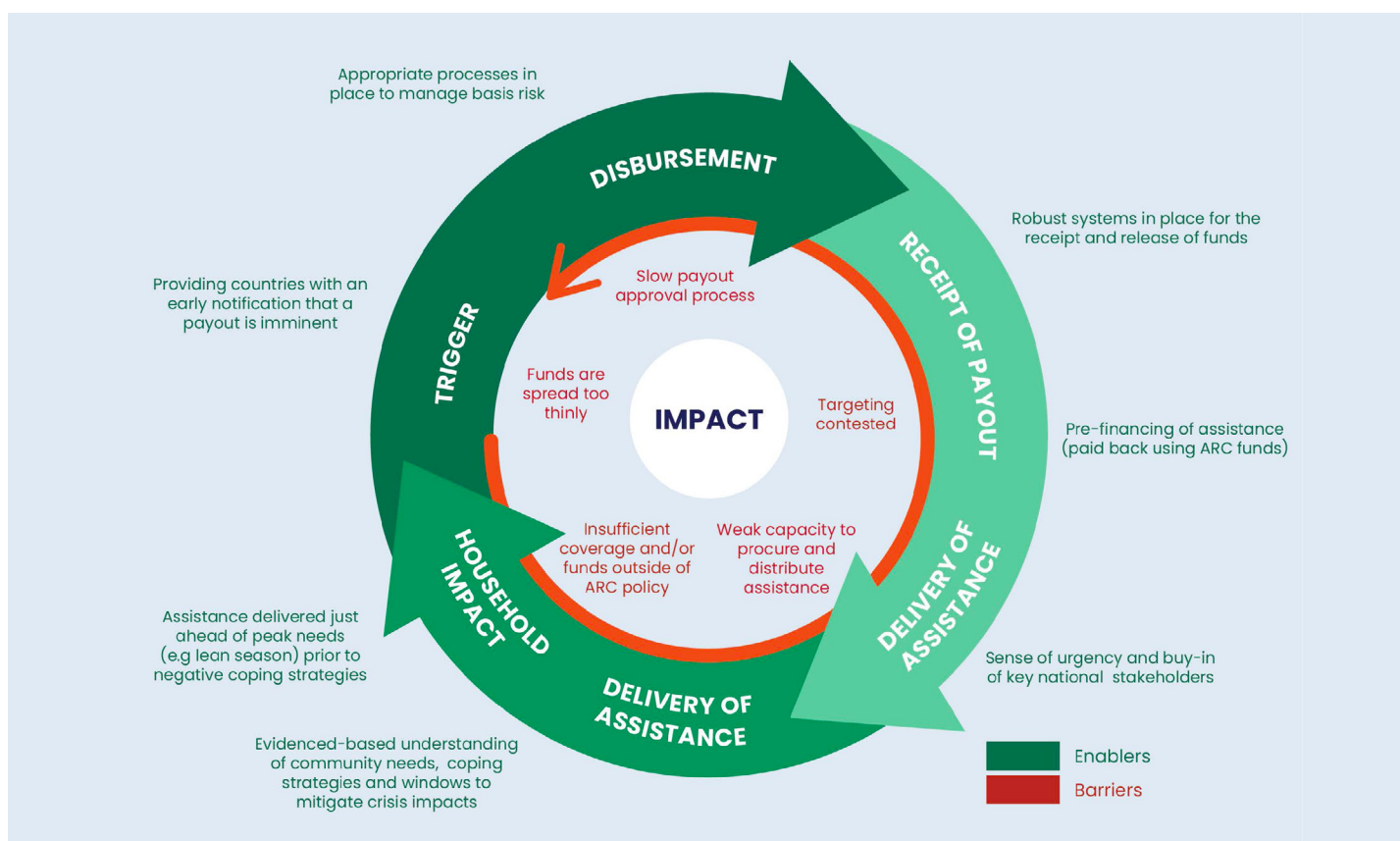
**Method:** Protecting nutrition is a key goal of the insurance mechanism, and governments often use the payout to provide emergency cash transfers to affected populations, for example. Other actions include funding of agricultural extension support for existing livelihoods, food aid, seed provision, and support for alternative livelihoods/businesses (Poole et al. 2024). ARC works with countries to determine the most feasible form of support, which is ultimately selected by the countries but confirmed with ARC before the insurance policy is purchased. At the time of a payout, changes can be made to the contingency plans, due to factors such as procurement difficulties or rationale that a cash injection may not be sustainable for local markets. The driving factors for changing aid modality are notably timing and targeting related. In some cases, ARC and country officials agree to change the pre-planned use of insurance payout funds in order to reduce the time to delivery of assistance while maximizing responsiveness to community needs. (Oxford Policy Management 2022).

**BOX 10.** Continued

After a failed harvest, affected people engage in negative coping mechanisms, such as reducing food intake and selling productive assets, and therefore the timing of external support is critical. The speed of drought aid is one of the determining factors of its success in preventing malnutrition, yet even ARC payouts have not always been able to reach people in time (Montier & Ward n.d.). Critical factors of delays include systems for the receipt and release of funds, and slow targeting processes and capacity to distribute assistance (Figure 11).

**Means:** Funding for the ARC premiums comes primarily from national budgets. Some countries receive support in the form of grants from international donors, and financial instruments (grants and loans) from the African Development Bank or the World Bank.

**FIGURE 11.** Determinants of success and speed of delivery in Africa Risk Capacity.



Enablers in green are listed on the outside, and barriers in red are listed on the inside. Figure from an ARC evaluation by Montier & Ward (n.d.), used with permission.