

Anticipatory action to mitigate drought-induced crises

Tracking drought impacts and
aid responses in Kenya and
Somalia, 2020-2022



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Based at ILRI in Nairobi, Kenya, we combine the local knowledge and concerns of communities facing on-the-ground threats of hunger with innovations in data science and humanitarian action; teaming up to devise solutions that can predict, prepare for, and overcome climate-related food security and malnutrition challenges in dryland areas.

jameelobservatory.org / info@jameelobservatory.org

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Executive summary

Communities in the arid and semi-arid land (ASAL) regions of Kenya and in Somalia are currently experiencing a devastating drought as a result of the cumulative impact of three consecutive poor rainy seasons.

Both the October-November- December (OND) 2020 rains and the March-April May (MAM) 2021 rains were poor across the region and the OND 2021 rains largely failed, marking the third consecutive below-average season across pastoral and marginal agricultural areas of eastern and northern Kenya and Somalia.

Some of the lowest rainfall recorded in the last 40 years has combined with the effects of locust invasions, which destroyed crops in 2020, the COVID-19 pandemic, which depressed markets and reduced incomes, and now exceptionally high food and fuel prices to make this the most severe crisis to affect the region in many years. Household resilience is now being overwhelmed in many areas although there are indications that this would have happened earlier without the investment made in resilience building.

Current estimates suggest six million people in Somalia need food assistance to prevent Crisis (Phase 3 in the Integrated Food Security Phase Classification [IPC]) or worse outcomes from April to June¹. In Kenya, there are 3.1 million food-insecure people in pastoral and marginal agricultural areas, a 48% increase since August 2021 (Famine Early Warning Systems Network [FEWS NET], March 2022).

Experts agree that, unlike the response to drought in 2017, the aid system has largely failed to act early enough and at scale to prevent the current crisis.

This report presents the results of a study on anticipatory action to the ongoing food security crisis. The study, commissioned by the Jameel Observatory for Food Security Early Action, with Save the Children and University of Edinburgh, aimed to enhance understanding of what is needed at a national and sub-national level to ensure anticipatory action to prevent or mitigate drought-induced crisis². The study focused on anticipatory action (AA). It looked for evidence of actors using climate forecasts and projections of food security conditions to intervene and prevent or mitigate widespread negative impacts on people's lives. It also explored the barriers and enablers for anticipatory action and developed recommendations for strengthening systems to support such action in future.

Research teams in Somalia and Kenya carried out in-depth analysis of early warning and drought monitoring data to produce detailed timelines of the crisis. The retrospective timeline developed for this study covers 21 months (four wet and four dry seasons) from March 2020 to December 2021 and illustrates the differences between the forecasts and projections of the upcoming season and the actual performance of seasons over time.

Between December 2021 and March 2022, the teams interviewed nearly thirty people in each country, ranging from community members to regional policy makers, to understand how they reacted to early warning information and what action was taken. Detailed case studies on key components of the EA were developed to illustrate the barriers and enablers.

¹ The Integrated Phase Classification scale (<https://www.ipcinfo.org>) is used to define severity. There are five phases for food security: Minimal, Stressed, Crisis, Emergency and Catastrophe/Famine, and five phases for nutrition: Acceptable, Alert, Serious, Critical, Extremely Critical.

² According to the UN Office for the Coordination of Humanitarian Affairs (OCHA), anticipatory action is a set of actions "taken in advance of a crisis, before either the shock or its peak impact" <https://anticipatory-action-toolkit.unocha.org/first-steps>

Key findings

Early warning forecasts and projections have improved and are credible

Stakeholders reported that a large amount of data for forecasting and projecting is collected, collated and used for early warning purposes to varying degrees. The data is increasingly analysed using common analytical frameworks (IGAD Climate Predictions and Applications Centre, Food Security and Nutrition Analysis Unit and FEWS NET). Analysis is trusted, well communicated and used in decision making, particularly within the humanitarian cycle. Analysis and related decision making is gradually being owned and led by governments, and there is evidence of local non-governmental agency and community participation and inclusive decision making in some areas in both countries. Forecasts and projections platforms are successfully using technology, learning and technical improvements to increase the confidence in their analysis. The increasing availability of data and analysis is allowing greater capacity to triangulate and provide more nuanced pictures of the potential impacts of climate shocks on livelihoods. Informal/community-level early warning systems, based on localised, more qualitative information, are working well in many areas. However, there is a persistent disconnect between these systems and the more formally recognised systems, with informal/community-level systems not effectively integrated into the formal system. Despite good initiatives by climate and early warning institutions, two-way communication of information between communities and formal early warning systems, remains a challenge.

Despite the availability of credible analysis, the timing for triggering anticipatory action for slow-onset emergencies in fragile areas of East Africa is fraught with difficulties

In both the ASALs of Kenya and in Somalia, climatic seasons (i.e., wet and dry seasons) are a fundamental element of each livelihood system and strongly influence food, nutrition, health, and WASH systems and outcomes, including the risk of famine. The review of available information from multiple sources suggests that AA could have been triggered for Somalia as early as August/September 2020 when two consecutive below average rainfalls seasons were forecasted, reinforced by a FEWS NET alert which was issued in August 2020. From this point until just after the MAM 2021 rains there were multiple reinforcing forecasts, alerts and projections that increased the confidence in taking a “no regrets” approach to triggering AA. For Kenya, the earliest possible date for AA was probably January/February 2021.

The performance of a season is highly variable temporally and geographically. The impact of the seasonal shock on food insecurity, livelihoods, health and nutrition and excess mortality, is influenced by the history of previous shocks and by the types of livelihoods. Therefore, the timing and type of AA taken should be temporally and geographically context specific. This raises questions around how AA can best be triggered for smaller-scale crises, for example, in sub-national areas, where crises are not evident in the rest of the country.

Challenges remain in interpreting and using early warning analysis to trigger anticipatory action

Early warning-early action (EW-EA) gaps remain a significant barrier. The barrier is related to early action systems issues but also to several factors related to the way that the early warning system works. There is inherent uncertainty for triggering anticipatory action in complex contexts such as Somalia and the ASALs of Kenya where climate shocks are just one variable of how livelihoods systems are absorbing, adapting and transforming. Currently, early warning systems tend to use a linear or circular perspective of a drought being an event with three stages – before, during and after, resulting in a continuum model and typology of responses progressing from AA to early response, response and early recovery.

For those directly experiencing the complex impacts of climate shocks, coping with drought's effect on their livelihoods is not an event that begins and ends. Local responses to the current drought are conditioned by the history of their responses to previous shocks and will play a significant part in how they will cope with future shocks. This study has found that EW-EA gaps are much reduced at the local level, with principal barriers being capacity and resources, not agency to act and knowledge of when and what to do for AA. The formal system is beginning to apply whole system approaches to AA across the humanitarian /development nexus but interviewees could offer little clarity on the vision for the future of AA, further exacerbating EW-AA gaps.

Current early warning systems tend to concentrate on the impact of climate shocks on rural populations and food security elements such as impacts on markets, production, access to food and food consumption. As a result, the more complex issues of social networks, intra-household factors, health, nutrition, WASH, urban populations, gender and social inclusion (to name a few) tend to get downplayed in the analysis and as a result in the action planning. Decision makers find it difficult to know how to act to anticipate the more complex impacts of the shock and focus disproportionately on food security related interventions.

Uncertainty about the interpretation of the early warning analysis also delays action. More data, more sophistication of analysis and more analytical frameworks increase the nuanced understanding of the dynamics of the crisis but increase the gap between analysis and decision makers' understanding and ability to make appropriate decisions. More data and analysis also increase the possibility for divergence in forecasts and projections, reportedly resulting in less understanding, confidence and use of the analysis. Regular updates are seen as both increasing and decreasing uncertainty. On the one hand, the complexity and volatility of the context demands regular updates and on the other hand, focusing too much on short-term changes can confuse

longer-term decision making. Mitigating the politics of early warning, particularly in election years, is not considered enough in the way that early warning is analysed, communicated, and integrated into decision making processes.

There is evidence of strong capacity and resources for anticipatory action in local and informal systems but gaps in operationalising system-wide thinking remain

Approaches where implementers of AA worked closely with local communities were shown as being instrumental for addressing food insecurity, livestock loss, and other negative impacts on livelihoods in both countries. Deteriorating conditions were picked up earlier and influenced decision making in social networks, local government and non-governmental agencies (NGOs). Most respondents in Somalia reported that community-based systems were the fastest to respond in the event of a crisis. Informal social networks and community-based systems continue to be the first to act and present some of the few examples of genuine anticipatory action. Informal coping mechanisms have played a critical role in alleviating challenges faced by households in Somalia in the face of complex, co-occurring, intersecting, and recurrent drivers of need. Local NGOs and local government have played a strong role in anticipatory action in this drought across both countries. While there are examples of strategies to link up community and social network-led mechanisms for mobilising resources and taking anticipatory action with formal response systems, there is limited evidence of this working in practice.

Small scale forecast-based financing has demonstrated impact but it is not widely available

Evidence shows that early interventions using forecast-based financing have an immediate and significant return on investment. Several studies have confirmed the value of triggering funding based on a forward projection of disaster conditions to support action taken ahead of a crisis unfolding. However, in this region, the most common source of financing for AA in response to early warning is the contribution from community members. Based on the interviews conducted for this study, other stakeholders (government and NGOs) either did not have access to dedicated funds for AA or the funds they did have were very quickly exhausted, especially in the context of multi-season climatic shocks. Response actors report limited willingness or flexibility to repurpose funds (NGO, UN, donor and government). Although donors, the UN and NGOs do seem to have demonstrated willingness to divert existing funding in both countries, the bureaucracy around this is still too heavy.

There are many examples of prepositioned resources for drought, including contingency funds and crisis modifiers, but in most cases the trigger for release is the emergency, not forecasts. The AA pilot funded by the Central Emergency Response Fund and the World Bank in Somalia provides some important learning on developing AA systems, particularly in agreeing on what the funding is aiming to do and how to define appropriate, context-specific action.

Action taken by most stakeholders was more appropriate to relieving the impacts of the drought than protecting livelihoods and strengthening systems.

Despite the demonstrated value of forecasts to predict heightened risk of food security crises and the clear advantages of AA, decision making and triggers are still linked to emergency response. AA is still a relatively new concept and many stakeholders were more comfortable talking about early action systems or preparedness than taking forecast-based or anticipatory action. In Somalia, the Government and humanitarian system's

predominant strategy for action is highly shock responsive and only springs into action once a crisis has emerged and funding becomes available. There is evidence that models for AA (including national protocols for forecast-based action and shock-responsive social protection) are being developed and institutionalised in both countries, but the experience of the pilots for these models was mixed in 2020–22.

Systems for the governance of AA seem to be missing in both countries. Existing systems for EW-EA are more orientated towards triggering and coordinating emergency response. Stakeholders reported that AA mechanisms in different organisations operate in silos and there is a need for greater harmonisation and coordination. The Ending Drought Emergency programme in Kenya includes frameworks to enable earlier drought response and has resulted in emergency policy and disaster risk management bills to enhance accountability, which are being passed by counties. However, even this system is still reactive and has not yet begun to address systems for earlier and more proactive action including AA. Despite these challenges, this is one of the few examples of a systems approach to enable action to reduce the impacts of predictable climate shocks. In Somalia, the building blocks for a systems approach are gradually being constructed and brought together but most anticipatory action takes place within the informal system.

Local community representatives in Kenya felt the response to the current drought was less effective than previous ones, mainly because of problems of transparency and accountability. Opaque governance of the response and lack of clarity of who is accountable for where, how and by who the funds are used persist and undermine confidence in the systems. In both countries, responses were seen to be primarily reactive rather than proactive with a focus on relieving immediate food- and water-related stress in affected geographical regions. In some programmes in Somalia, targeting has improved and is based on a transparent, collaborative selection process.

Stakeholders are still struggling to understand what action is appropriate in anticipation of a crisis. This is further complicated when the food security crisis is caused by multiple shocks and some populations are facing crisis levels of food insecurity (i.e. already in IPC Phase 3+) before a crisis is forecast. Aid organisations in Kenya were honest enough to agree that they had not taken any **anticipatory action**. They felt that they had responded early to the early warning systems (National Drought Management Authority [NDMA] bulletins and seasonal forecasts) but the action taken was to relieve the already escalating drought impacts. There have been several initiatives to strengthen shock-responsive social protection (SRSP) in both countries and these have huge potential for AA. However, stakeholders feel that this has been “too little, too late” in contrast to 2016–17, when early action was thought to have prevented a deterioration into emergency for many households

Recommendations to strengthen anticipatory action

Develop a common vision and strategy for anticipatory action in different contexts

All key informants were clear that AA means responding earlier in anticipation of future impacts of the climate crisis but were not clear about how AA related to a continuum response model including disaster risk reduction, early action, early response and response. As a result, this study struggled to collate and describe clear examples of AA within the formal system, with the exception of the CERF pilot. In contrast, the informal community-based system of AA by its very nature was seen to be anticipatory, albeit with many challenges still to be addressed. One of the most significant challenges is the link between the formal Governmental and aid systems and the informal community-based systems and the role of local and informal actors in shaping and leading decision-making. This lack of clarity on a shared vision of the objectives of AA results is a missed opportunity to realise the full value, and hopes, of using AA approaches.

Uncertainty around three issues seem to be at the core of this problem:

1. How should we address the age-old problem of early warning-early action gaps? Despite significant improvements in the forecasting and projection system, actors, particularly at the national and global level, are still struggling to trigger appropriate and earlier actions at the required scale and over a longer duration.

2. What are the most appropriate actions to be taken, for whom, to mitigate what negative impacts of crisis, and when is it best to do this? How big, in terms of severity and magnitude and type of crisis, should the impending crisis be to trigger AA? There is confusion around whether AA is the first step in a continuum of response followed by early action, early response and response. A complementary view is that AA constitutes forward-looking actions to anticipate a future escalation of food insecurity and malnutrition, as opposed to early anticipation of a crisis, and can therefore take place at any stage of the crisis.

3. Where does AA fit in the international aid system and crisis response system and in local systems? Respondents had different views on where AA fits in the nexus between humanitarian response and development programming, and how it best links to support the less formal community-based system and networks. Is it more of a development responsibility, similar to disaster risk reduction? Is it just part of resilience building? Is it more of a humanitarian action, similar to early response. Or is it part of all of these? The vision for localisation of AA is still undefined but good small-scale examples of what works are emerging.

We suggest that the future vision for AA should see it as integral to all parts of formal and informal systems. Currently, there appears to be a tendency to concentrate on project level stand-alone AA pilots. Our findings suggest that the answers to the major challenges for AA in the future will be found by considering AA as a behaviour or feature of all development and humanitarian planning, budgeting, and response, not a stand-alone structure.

Integrate anticipatory action into existing systems and use a nexus framework to define the future vision for anticipatory action

This review in Kenya and Somalia points to the need to **integrate AA into existing formal structures of government, development, resilience and humanitarian programming and to develop better links to and participation of informal/community-based and led systems**, thus avoiding creating new structures, new funding streams and new debates on the value and objectives of AA. Having AA as a principle for strengthening the shock responsiveness of all these systems would also allow AA more flexibility to respond more appropriately to many, and any, types of impending crises at the same time and at most stages of a crisis, not just at the beginning of visible crises, such as droughts or floods or locusts, and to many smaller and medium-sized crises.

There is much to be gained from paying more deliberate attention to ensuring that representatives of informal /community-based AA systems participate in and are included in decision making and leadership of formal systems of AA. **Much more two-way communication will help formal systems to respond earlier and more appropriately, and will help local actors respond more appropriately and target some of the most vulnerable.**

Localise anticipatory action

Further integrate informal/community systems' early warning approaches into formal systems

Regionally, there are several examples of linking customary climate forecasting systems with formal early warning systems. Lessons learnt in those projects provide a starting point for the next steps in localisation of early warning. A first

step could include strengthening the two-way communication between formal and informal early warning systems to improve the timeliness, targeting and types of actions decisions used.

Explore opportunities to better link local and national/international decision making on triggering of appropriately timed, targeted and choice of anticipatory actions.

The experience, knowledge, capacity and agency to take contextually appropriate AA was found at a local level, from sub-national to community level, and in the informal system. The international system, for the most part, remained divorced from local community decision making at the beginning of the response and indeed is still, to a large extent, operating separately from the community-based responses. Decisions about the timing and type of AA that is required should start at the local level and higher levels of decision making should concentrate on facilitating local-level decision making, adaptability and learning on responding more proactively to the complex, overlapping and continuous effects of climate-related crises on communities and their livelihoods at large. As the magnitude, duration and severity of the need for AA increase, so the need for AA resources and capacity will increase. Contingency planning with local decision makers can facilitate the gradual scale up of support for the local response and, eventually, joint formal and informal implementation of AA.

More specific recommendations include:

- **Simplify and standardise the formal national and international level triggers for anticipatory action and their communication to decision makers to allow earlier “no regrets” decisions to be made and to increase community-level leadership in decision making.**

Clarify which national-level decisions are key for facilitating local-level leadership and decision making about anticipatory action. For example, clarify longer-term issues such as mechanisms for releasing funds, triggering preparedness actions to mitigate against future shocks and establishment of mechanisms to enable contextual, flexible and adaptive sub-national and local decision making.

- **Produce more regular updates of food security and nutrition outcome projections through real-time monitoring and tools.**

As crisis drivers and their livelihood outcomes are complex, often overlapping, highly dynamic and often unexpected, a more real-time analysis of the drivers and outcomes of climate-related crisis is required. Tools such as household economy analysis (HEA) can regularly adapt and adjust decision making about the food security and livelihoods dynamics and types of actions to be taken, especially at sub-national and local levels. Critically, HEA can integrate real-time data to update projected food security and livelihoods outcomes and facilitate triggering for AA.

Considerably strengthen the inclusion and participation of affected communities and local and social networks in regularly updating, adjusting and adapting decision making about the timing, targeting and type of anticipatory actions to be taken.

Strengthen AA triggers and thresholds at the lower end of tiered severity classification systems (for example, IPC Phase 2 [Stressed], or Alert in the NDMA early warning system).

Potential areas for further research and learning

In Kenya

- Explore in depth how the triggering of National Drought Management Authority (NDMA) drought response funds and county contingency funds could happen earlier at county and sub-county level. For example, in addition to using the NDMA EW-EA bulletin as a trigger, could climate forecasts and projected outcomes (e.g. FEWS NET, IPC, HEA) also trigger AA before negative changes are flagged by the EW-EA bulletin?

- Explore how international actors can better engage with Government systems for early response and AA, including for triggering AA, to decide how best to provide technical assistance, and capacity strengthening of the system and individuals.
- Study how forecasts, projections, and systems such as the NDMA early warning bulletins can trigger a more holistic and anticipatory (forward-looking) package of innovations; for example, paying more attention to health, nutrition, gender, social inclusion, social capital, and issues in addition to water trucking, livestock offtake and livestock feed.
- Investigate how AA can be triggered in counties and sub-counties that are increasingly affected by climate shocks but do not traditionally have the systems and attention to trigger significant early or anticipatory action, for example, arid parts of coastal counties, counties such as Kitui, and counties bordering Tanzania.

In Somalia

- Explore in depth what early warning information and decision-making processes the Somali diaspora, businesses and religious networks used to respond to the drought in late 2020 and through 2021.
- Conduct action research on approaches to collaborating with Somali community-led response systems to make the triggering of international AA more effective, efficient and equitable, and connected to local anticipatory action.
- Support the nascent Somali federal and state governments' systems to use forecasts and projections to trigger AA with an eye to recommending how the international aid system can provide capacity strengthening and technical assistance for the development of the system.

In both countries

- Study how social exclusion, social capital and gender issues can be better represented in AA triggering systems.
- Explore how national/international triggering of AA can facilitate local triggering of AA.

Acronyms

AA	anticipatory action	IGAD	Intergovernmental Authority on Development
AFI	acute food insecurity	INGO	international non-governmental organisation
AMN	acute malnutrition	IOM	International Organization for Migration
ASALs	Arid and Semi-Arid Lands	IPC	Integrated Food Security Phase Classification
ASAP	Anomaly hotSpots of Agricultural Production	KES	Kenya shilling
BHA	Bureau for Humanitarian Assistance	KFSSG	Kenya Food Security Steering Group
BRCiS	Building Resilient Communities in Somalia	KII	key informant interview
CERF	Central Emergency Response Fund	KRC	Kenya Red Cross
CHC	Centre for Humanitarian Change	LNGO	local non-governmental organisation
CSG	County Steering Group	MAM	March-April-May
DANIDA	Danish International Development Agency	NDMA	National Drought Management Authority
DRR	disaster risk reduction	NGO	non-governmental organisation
EDE	Ending Drought Emergencies	NMME	North American Multi-Model Ensemble
EW-EA	early warning and early action	NOAA	National Oceanic and Atmospheric Administration
EWS	early warning system	OCHA	United Nations Office for the Coordination of Humanitarian Affairs
FAO	Food and Agriculture Organization	OND	October-November-December
FbA	forecast-based action	SCI	Save the Children International
FbF	forecast-based financing	SMS	short message service
FCDO	Foreign Commonwealth and Development Office	SWALIM	Somalia Water and Land Information Management
FEWS NET	Famine Early Warning Systems Network	UNICEF	United Nations Children's Fund
ForPAC	Forecast-based Preparedness Action	UNHCR	United Nations High Commissioner for Refugees
FSNAU	Food Security and Nutrition Analysis Unit	USD	United States dollar
FSNWG	Food Security and Nutrition Working Group	USGS	United States Geological Survey
GBP	Pound sterling	VAM	Vulnerability Analysis and Mapping
HADMA	Humanitarian Affairs and Disaster Management Agency	WASH	Water, Sanitation and Hygiene
HEA	Household Economy Analysis	WFP	World Food Programme
HSNP	Hunger Safety Net Programme	WHO	World Health Organization
ICPAC	IGAD Climate Predictions and Applications Centre	WISER	Weather and Climate Information Services for Africa
IFRC	International Federation of Red Cross		

1. Introduction

1.1 Background and rationale

People in the arid and semi-arid land (ASAL) regions of Kenya and Somalia are currently experiencing a devastating drought as a result of the cumulative impact of three consecutive poor rainy seasons. Both the 2020 short rains (October to December) and the 2021 long rains (March to May) were poor across the region and the October to December 2021 short rains largely failed, marking the third consecutive below-average season across pastoral and marginal agricultural areas of eastern and northern Kenya and Somalia. The ongoing drought and some of the lowest rainfall recorded in the last 40 years made Somalia the most severely drought-affected country in the Horn of Africa in January 2022, with 4.3 million people affected, and 271,000 others displaced. Apart from the 2020 floods that affected 919,000 people and the catastrophic desert locust invasion, the onset of COVID-19 in early 2020 exacerbated existing vulnerabilities and added unique ones, pushing the humanitarian crisis even further. The President of Kenya declared a national disaster on 8 September 2021, which triggered the release of national disaster funding. In Somalia, the President declared a national state of emergency on 25 April 2021, again on 23 November 2021 and again in January 2022, appealing for international assistance to be scaled up.

This study of anticipatory action (AA) in the ongoing food security crisis in the Horn of Africa was carried out by the Centre for Humanitarian Change (hereinafter CHC) for the Jameel Observatory for Food Security Early Action to enhance our understanding of what is needed at a national or sub-national level to ensure anticipatory action. The research planned to generate a detailed understanding of blockers and enablers of anticipatory action in Kenya and Somalia, to drought-induced crises at a localised level, through real-time and historic tracking of data sharing, decision making, and action from the failure of the October-November-December (OND) rains in 2020.

The research specifically explored the timeline of the release of information and the decisions and actions of different actors in each context. It also mapped the roles of different actors and the coordination mechanisms to support AA in each context.

The study also explored changes since 2011 which have enabled AA; in particular, the extent to which the recommendations of the influential 2012 Dangerous Delay report (Hillier and Dempsey, 2012) have been implemented, specifically looking at the following key recommendations:

- Do not wait for certainty before responding
- Develop a common approach to triggers and early action
- Provide political leadership for drought response (especially in devolved government in Kenya)
- Allow for adaptable, long-term development approaches
- Undertake preventative humanitarian work ("no regrets", resilience strengthening)
- Integrate risk management into systems (people and organisational structures)
- Have more agile and flexible funding mechanisms among donors

The UN Office for the Coordination of Humanitarian Affairs (OCHA) defines AA as a set of actions "taken in advance of a crisis, before either the shock or its peak impact. AA is a proactive intervention, which takes place upon issuance of a warning or activation of a trigger. AA is this considered to be a synonym for early action. Over the past two decades, more attention has been paid in the humanitarian sector to AA and it has gained further attention in the global policy arena following the failure of the humanitarian system to respond in line with early warning information to prevent famine in Somalia in 2011.

Governments and other key aid actors have made new pledges for forecast-based financing (FbF) through new financing modalities to facilitate AA such as pooled funds, crisis modifiers and unrestricted financing. One recent example was the High-level Humanitarian Event on Anticipatory Action in September 2021, convened by OCHA and the Governments of Germany and the UK, that brought together leaders from across governments, international financial institutions, the United Nations (UN) and civil society, who delivered powerful statements on their commitments to act ahead of crises.

Even though there is some progress, we still lack a detailed understanding of the system for anticipatory action at a localised level to help us close the gap between high-level policy debates and commitments, and the lived reality for affected communities. A recent review has also highlighted local constraints on early action, including the politics of information and analysis, speed in the allocation of resources and the challenges presented by the COVID-19 pandemic, which must also be considered (Maxwell, et al., 2021).

This research delves deeper into barriers and enablers of AA, looking into what has changed over the last 10 years, since the release of the Dangerous Delay report, and recommends some actions to strengthen anticipatory action.

1.2 Explanation of terminology

This study aimed to track early action to slow the onset of food crises but much of the literature refers to “anticipatory action” and “forecast-based action” interchangeably. In the literature review, different actors interpret these terms differently and there is no common understanding among them. In interviews, many key informants discussed action that they had taken in response to worsening drought conditions and referred to this as “early action”. There is therefore considerable confusion over the difference between early action (in response to a forecast or reaching thresholds in an early

warning system) and early response at the start of a humanitarian crisis. For the purposes of this report, we have chosen to use the term “anticipatory action” with the OCHA definition above. This includes forecast-based action (FbA) as a sub-set, which is triggered by a weather forecast or predicted food insecurity.

1.3 Report outline

Following this introduction, Section 2 describes the methodology. Section 3 gives an overview of how the crises developed in Somalia and Kenya, based on the secondary analysis of relevant data sets, and develops timelines for the crises. Section 4 summarises how AA systems produced and responded to early warning in Somalia and Kenya respectively, based on the literature review and key informant interviews (KIIs), and includes a summary of enablers and barriers to AA. The ways in which recommendations of the Dangerous Delay report have been taken up in the last 10 years are explored in Section 5. Section 6 contains recommendations and reflections. A full list of references and related URLs used for the literature review follows Section 6. Case studies which illustrate the main conclusions of the study were developed and are summarised in numbered boxes at relevant points in the main body of the report. Annexes contain the main tools and methods used for the study.

2. Methodology

2.1 Study approach and design

The study was based on a research matrix developed at the start of the project which laid out key research questions and sub-questions, as well as areas of enquiry to examine the onset of drought and food crisis in Kenya and Somalia from March 2020 to December 2021 (see Annex 2). The second phase of the study adopted a case study approach to explore examples of barriers and enablers to AA in the two countries.

2.2 Desk review summary

The CHC team reviewed numerous documents from non-governmental organisations (NGOs), think tanks, foundations, UN agencies, and academic journals. Much of this literature echoes themes addressed in this report. Our summary highlights some of the key takeaways and lessons learnt and are organised into four key thematic areas.

2.3 Data collection methods tools and sources

Secondary and primary data collection were conducted concurrently, with tools designed for the key research questions. Specifically, secondary data was collected through a comprehensive desk review and analysis of drought-related databases that included climate/drought updates, rainfall forecast and remote sensing maps; food security updates and Integrated Food Security Phase Classification (IPC) maps; market and food price monitoring bulletins; water, sanitation and hygiene (WASH), and conflict data; grey literature on early or anticipatory action; and media and advocacy reports; drought funding and appeals; and media and early warning timelines.

Key informants were purposively sampled through a stakeholder mapping exercise in Kenya and Somalia at both national and sub-national levels and primary data was collected through key informant interviews (KIIs) using an interview guide tailored to specific type of informants. The informants comprised government officials, staff from international, national and local NGOs, and community representatives, where possible.

All data collection with stakeholders in Kenya and Somalia in the first round for this research was undertaken remotely, by phone or on internet platforms. In the second round, team members from CHC undertook a field visit to the counties of Kwale and Wajir in Kenya while data was collected remotely in Somalia.

2.4 Data analysis and presentation

Document content analysis and plotting of timelines informed analysis of secondary literature and data while thematic content analysis informed qualitative primary data analysis.

2.5 Limitations and challenges

The main limitation in fulfilling the objectives of the terms of reference was the timing of the study. While the intention was to track how AA systems were being used, the drought conditions had worsened and a full-scale emergency had been declared in both countries by the time the study started. It is important to note that local actors in this context struggled to distinguish between anticipatory /early action and early response. Data collection tools were adapted for different key informants which made it difficult to compare responses across Somalia and Kenya.

There were also significant challenges in engaging some stakeholders in Kenya during the December 2021/January 2022 period when the first round of data collection took place.

This was partly due to the escalating drought crisis in the counties and the unwillingness of government officials to prioritise an interview for research purposes, but also due to the holiday season when many people were on leave or travelling. Even after the holidays, some key organisations, particularly the UN, were too busy to spare time for an interview and detailed information on timing of funds release and drought action was very difficult to obtain³. In Kenya, the National Drought Management Authority (NDMA) was going through structural changes and it was difficult to identify the right person to talk to.

³ WFP and FAO have subsequently produced their own analysis of early warning and early action, which was not available during data collection for this study.

3. How the crises developed; Timing of opportunities to trigger anticipatory action

Key headline findings

- Anticipatory action might have been triggered for Somalia as early as August to September 2020 when two consecutive below-average rainfall seasons were forecast, reinforced by a FEWS NET alert issued in August 2020. From this point on until just after the March-April-May (MAM) 2021 rains there were multiple reinforcing forecasts, alerts and projections that increased the confidence in taking a “no regrets” approach to triggering forecast-based action.
- For Kenya, the earliest possible date for AA was probably January/February 2021.
- The performance of a season is highly variable, temporally and geographically. The impact of a seasonal shock on humanitarian outcomes, food insecurity, livelihoods, health and nutrition, and excess mortality is influenced by history of previous shocks and livelihood zone. Therefore, the timing and type of anticipatory action taken is both temporally and geographically context specific.
- Given the complexity and uncertainty inherent in the use of forecasts and projections, the analysis suggests that AA decision making should be a combination of micro (local), meso (sub-national) and macro (national) processes for making decisions and acting.
- The national and global timing of triggering and the choice of appropriate anticipatory actions should aim to facilitate the more local participatory, qualitative and locally led decision making on timing and choice of actions, including the local use of Household Economy Analysis.
- Furthermore, there are questions about whether AA should be triggered for a smaller-scale crisis, such as one in a sub-national area, if there is no crisis in the rest of the country. Also, whether AA should be triggered for the localised crisis impacts of only one season failure.
- Forecasts and projections vary in their messages, depending on the outcome of interest, for example, acute food insecurity outcomes or rainfall performance, and vary according to the analytical framework used to derive expected outcomes, for example, Integrated Phase Classification (IPC) for projecting acute food insecurity, or United States Geological Survey / Climate Hazards Centre use of quantitative modelling and analogue years to forecast expected seasonal performance.
- The monthly NDMA Early Warning Bulletins are an important decision-making tool for the Government of Kenya and their partners. They also have the potential to trigger AA at the county and sub-county level. Use of the Somalia FSNAU early warning-early action dashboard to trigger AA could also be explored.

The analysis in this chapter is based on an in-depth desk review of early warning data and food security - related indicators. Subsequent chapters discuss similar themes but from the perspective of the key informants interviewed for the study.

3.1 Tracking early warning information

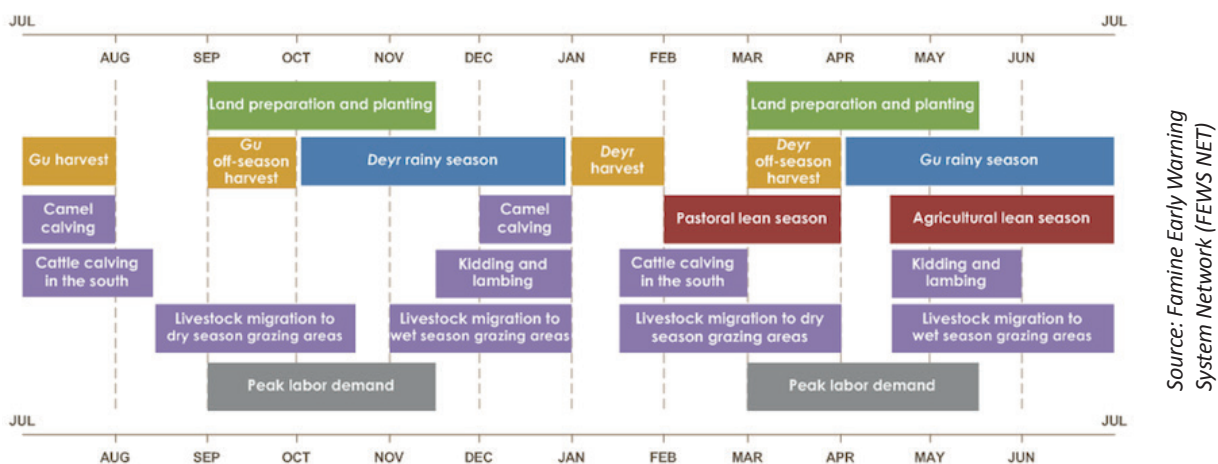
The timing for triggering AA for slow-onset emergencies in fragile areas of East Africa is fraught with difficulties. Improving the integrated use of data and analysis of seasonal forecasts and projections and analysing the subsequent impact on livelihood systems and food security outcomes are critical for more effective decisions about the timing, targeting and types of anticipatory action.

In the ASAL counties of Kenya and in Somalia, climatic seasons (i.e., wet and dry seasons) are a fundamental element of each livelihood system and strongly influence food, nutrition, health, and WASH outcomes, including the risk of famine. Each season is characterised by seasonal traits and expectations (the seasonal calendar) such as livestock movement patterns, crop production, human, livestock and crop disease prevalence, market dynamics, labour opportunities, household food stocks, access to and utilisation of basic services, and nutritional status⁴. All of these traits and expectations differ by livelihood zone.

The view that all of the Kenyan ASALs and Somalia can be represented by three seasonal patterns, as shown in figures 1 and 2 below, is somewhat simplistic.

For instance, Kenya alone encompasses seven seasonal classifications and parts of Somalia are described as bimodal and others trimodal, with many transitional areas between zones (Hermann and Mohr, 2011). Furthermore, the expected impact of a season on livelihoods, morbidity and malnutrition will be different according to the history of the impacts of previous seasons on the population in those areas. For example, a longer history of climate shocks may be expected to make an area or population more vulnerable to current climate shocks. It should be noted that, especially in Somalia, climate shocks also have negative impacts on significant populations who are less connected to rural livelihoods than those represented in the seasonal calendars, for example, internally displaced and urban populations. Thus, uncertainty around forecasts and projections and their expected impacts is abundant, with certainty only increasing as the season plays out. Nevertheless, governments, communities and humanitarian and development actors need to use available data and analysis, and their experience and knowledge, to decide when and where to trigger AA and decide on the most appropriate actions to be taken.

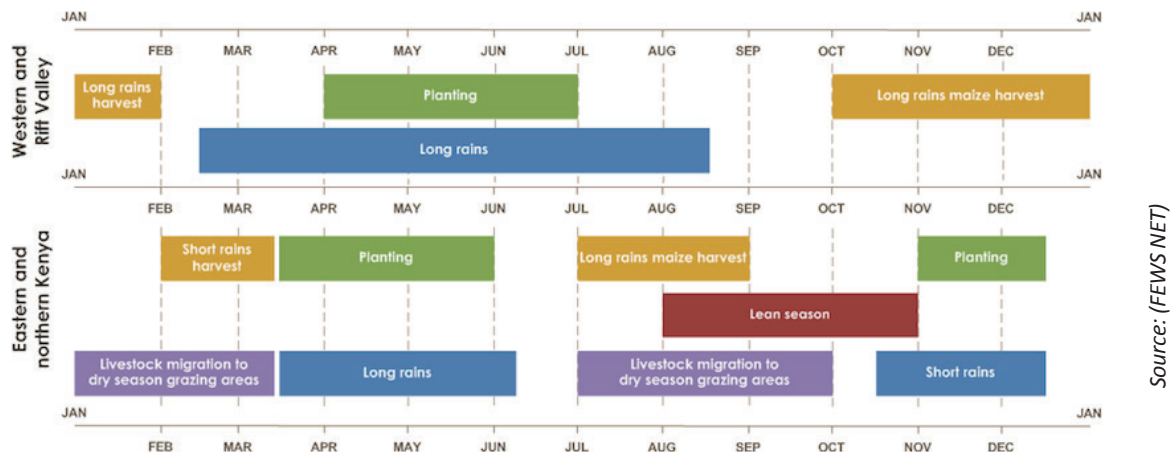
Figure 1: Somalia seasonal calendar



Source: Famine Early Warning System Network (FEWS NET)

⁴ These seasonal traits, examined through livelihood systems, underlying vulnerabilities and on-going hazards, are critical when determining current status (i.e., consumption gaps, livelihood changes, malnutrition and morbidity). When combined with relevant forecasts such as climate forecasts, expected crop production and price projections, seasonal traits, underlying dynamics and vulnerabilities, and current outcomes, they are fundamental building blocks for forecasting near- to medium-term outcomes (i.e., expected magnitude and severity of need in 1–6 months).

Figure 2: Kenya seasonal calendar



The retrospective timelines for Kenya and Somalia summarised in figures 15 and 16 (pages 15 and 16) cover 21 months, with four wet and four dry seasons, from March 2020 to December 2021. They illustrate the differences between the forecasts and projections of the upcoming season and the actual performance of seasons over time. The maps used illustrate the complex temporal and geographic picture of the progression of seasons and their food security and nutrition status outcomes. The timelines are based on widely available forecasts, analysis, early warning and situation analysis reports. As the sub-national and local data and analyses are not widely collected or reported, the discussion

below mostly focuses on national analysis and livelihood zone or county -and regional- level reporting. The discussion takes note of possible AA-triggering moments throughout the progression of the drought-related crisis provoked by the failure of at least three and perhaps four failed wet seasons, unprecedented since 1981. The timeline is organised using an analysis of six seasonal periods over the 21 months (Figure 3). The analysis looks at the climatic forecasts for upcoming wet seasons and projected food security and nutrition outcomes. The analysis also reviews the subsequent performance of the wet and dry seasons (where possible) to allow a discussion about the uncertainties of using forecasts and projections.

Figure 3: Analysis periods

2020						2021																	
June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December					
Period 1 - Post MAM Crop and Livestock Prospects for JAS Dry Season. Reports in this period provide insight to post-MAM outcomes and drive OND projections and forecast.			Period 2 - OND rainfall performance and expectations of harvest and livestock conditions. Critical period for pasture relief and crop production prior to JF Dry season.			Period 3 - Short dry period prior to MAM rainfall. Critical period for evaluating outcomes from OND rainfall season. Key rainfall forecast for MAM and OND are often produced in this period.			Period 4 - The primary production period, the MAM rains are essential, but also the most difficult to forecast. Real time updates on rainfall and market performance are critical.			Period 5 - Post MAM Crop and Livestock Prospects for JAS Dry Season. Reports in this period provide insight to post-MAM outcomes and drive OND projections and forecast.			Period 6 - OND rainfall performance and expectations of harvest and livestock conditions. Critical period for pasture relief and crop production prior to JF Dry season.								
AFI/AMN outcome Analysis (IPC/FEWS NET)			AFI Outcome Analysis (FEWS NET)			Outcome Update (FEWS NET)			AFI/AMN Outcome Analysis			Outcome Update (FEWS NET)			AFI/AMN Outcome Analysis (IPC/FEWS NET)			AFI Outcome Analysis (FEWS NET)			Outcome Update (FEWS NET)		
OND Forecast (Medium Term)		OND Forecast (Near-Term); MAM Forecast (Long Term)		Seasonal Monitoring Updates (Each Dekad); MAM Forecast (Medium Term)			MAM Forecast (Near Term);			Seasonal Monitoring Updates (Each Dekad); OND Forecast (Long Term)			OND Forecast (Medium Term)		OND Forecast (Near-Term); MAM Forecast (Long Term)		Seasonal Monitoring Updates (Each Dekad); MAM Forecast (Medium Term)						
Market and Price Updates (Monthly)																							
Waterpoint and River Levels (Daily)																							
Harvest and Livestock Prospects						Harvest and Livestock Prospects						Harvest and Livestock Prospects											
Rainfall, NDVI and Water Stress Remote Sensing Updates (Each Pentad)																							

Period 1 reviews the performance of the **March-April-May 2020 rainfall season (MAM, long, Gu)**, including relevant dynamics and outcomes during the subsequent **July-August-September 2020 dry season (JAS)**.⁶

The analysis in this period also includes forecasts for **October-November-December 2020 rainfall season (OND, short, Deyr)** and **projected acute food insecurity (AFI) outcomes through December 2020**.⁷

⁵ AFI and AMN projections represent an experiential and consensual analysis of how various drivers such as climatic performance, conflict, macro-economy are likely to unfold and interact with current outcomes impacting future AFI and AMN outcomes.

Period 2 is a review of the **OND 2020 rainfall season** and the associated dynamics, including intra-season dynamics, shifts in expectations, and accuracy of the OND 2020 forecast. Key forecasts used in the Period 2 analysis include **MAM 2021 forecasts** (medium-term forecasts), **expected harvest production from OND rains** and **projected AFI through January 2021**.⁸

Period 3 reviews the performance of the **OND 2020 rainfall season**, including relevant dynamics and outcomes during the subsequent **January-February 2021 (JF) dry season**. The analysis includes **MAM 2021 rainfall forecasts** (near-term) and **projected AFI outcomes through May 2021** (medium-term).

Period 4 is a detailed review of the **MAM 2021 rainfall season** including intra-season dynamics, shifts in expectations and the accuracy of MAM forecasts. There are no holistic outcome analysis reports during this period; however, the Famine Early Warning Systems Network (FEWS NET) produces an update report to most likely outcomes reported in the February report, key for monitoring likely shifts in outcomes.

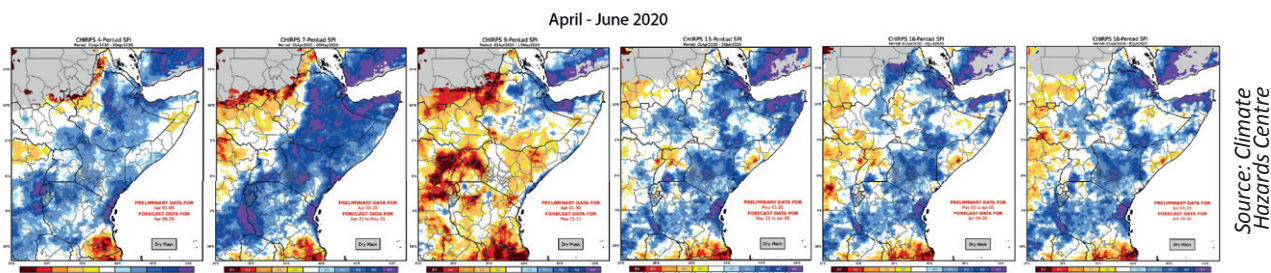
Period 5 outlines the overall performance of the **MAM 2021 rainfall season and forecasts and projections for the OND 2021 period**.

Period 6 is a detailed review of the **OND 2021 rainfall season**. Period 6 also provides a recap of the situation in each area at the end of December 2021 and forecasts and projections for early to mid-2022.

Period 1 – Performance of March-April-May 2020 rainfall season

The March-April-May 2020 (MAM; Gu; Long) rains across Somalia and ASALs in Kenya were considered favourable, except for southern Somalia, where localised dry spells were frequent (CHC, FEWS NET, NDMA, Anomaly hotSpots of Agricultural Production [ASAP], Food Security and Nutrition Analysis Unit [FSNAU]). However, in southern Somalia, dry spells at the end of the rainfall season outweighed the positive start (Climate Hazards Center/ National Oceanic and Atmospheric Administration [NOAA], FEWS NET) (Figure 4).

Figure 4: Standardized Precipitation Index with two-week forecast, April 1–June 30 2020



⁶Note that the MAM period also includes June; however, standard abbreviation for the long rains is MAM.

⁷The actual projection period may vary – IPC and FEWS NET have different projection periods for the post-MAM analysis (FEWS NET: October–January; IPC Somalia and Kenya: October–December; IPC Kenya: October–December)

⁸FEWS NET food security outlook reports are published in February and June. Projections are for a 9-month period. For example, October reports will project most likely outcomes through May the following year. Our analysis in this report reviews medium- and near-term forecasts but the emphasis is on short-/near-term forecasts, given the complexity of medium-term forecasts. FEWS NET reports are an IPC-compatible analysis, including an outcome map for current outcomes and projections. However, FEWS NET does not produce population tables. Therefore, general shifts in area-level outcomes are reported but the number of people facing crisis or worse outcomes is not provided. FEWS NET does not conduct acute malnutrition analysis therefore there is no update to outcomes or population in need for nutrition.

By June 2020, the Somalia national harvest was projected to be 30–40% below average (IPC analysis, June 2020). In August 2020, FEWS NET published a Food Security Alert highlighting recent forecasts that below-average rainfall was the most likely scenario for the OND 2020 and MAM 2021 seasons in the region (FEWS NET).

By September, rainfall forecasts indicated a high likelihood of below to average rainfall for the upcoming OND season across southern and central Somalia, and more of Kenya (IGAD Climate Predictions and Applications Centre [ICPAC], Somalia Water and Land Information Management [SWALIM], NOAA/CHC).

Overall, our analysis has classified the climate performance as positive for Kenya and neutral for Somalia, given poor rainfall performance in southern Somalia, and drought conditions as minimal (i.e., positive) in both countries. Box 1 defines the positive, negative and neutral classifications. Crop and livestock prospects were considered to be negative in Somalia, given a substantial decrease of 30–40 % in post-MAM production, but positive for Kenya. Markets were neutral in Somalia, while Kenya reported very positive price dynamics. Current and projected outcomes were also split, Somalia considered to be neutral, given negative underlying drivers, and Kenya to be positive.

Box 1: Definitions of positive, negative and neutral classifications used in this report

Positive: Quantitative evidence for the indicator is favourable and above (or below) average, or general tone of reports and analysis reviewed is positive about the situation. Examples include:

- Population in IPC Phase 3 (Acute Food Insecurity) decreased by 400,000: “Food security conditions have reportedly improved”
- Cumulative rainfall was 15% above average: “Rainfall season was exceptionally good”
- Maize price was 15% below the five-year average: “Market conditions are favourable and household income is above average”

Neutral/mixed: Quantitative evidence for the indicator is neither positive nor negative and within the average range, or general tone of most reports and analysis reviewed is mixed, with both positive and negative caveats. This can also include instances when the CHC team could not determine if the overall tone was positive or negative. Examples of neutral language may include:

- “AFI outcomes are in line with seasonal trends”, “AFI outcomes have improved drastically in agropastoral areas; however, AFI outcomes have worsened drastically for pastoralist areas in the north”
- “Rainfall was within seasonal range and distribution was normal”
- Maize price was 3% higher than in January: “Prices remain volatile but within the five-year average”

Negative: Quantitative evidence for the indicator is unfavourable and above (or below) average, or general tone of most reports and analysis reviewed is negative. Examples may include:

- Population in IPC Phase 3 increased by 400,000: “Food security conditions continue to deteriorate”
- Cumulative rainfall was 20% above average: “Rainfall season was insufficient and poorly distributed”
- Maize price was 15% above five year average: “Market conditions continue to be unfavourable for agropastoral areas due to below-average terms of trade”

The analysis of Period 1 presented above illustrates several points about the difficulties and complexity of triggering anticipatory action using meteorological forecasts. The MAM 2020 performance was deemed to be positive across Somalia and Kenya. However, the season was less positive in Southern Somalia with knock-on implications for the next dry and wet season in this area (Figure 1). There is a question as to whether AA could have been triggered for Southern Somalia as soon as this became clear in June or July 2020.

In turn, this raises a more general question about the scale at which – national, sub-national or local – AA systems aim to operate. Whilst forecasts and projections are available at scales below the national or sub-national, doing specific analyses for all these smaller-scale areas would involve significantly more analytical capacity than is currently available. At very local scales, this data and analysis is not always available. If AA is to be triggered at very local levels, then it is likely that, in the absence of locally detailed forecasts and projections, these triggers will need to be based mostly on local knowledge and experience. If the ambition is to use AA at a variety of scales, then it seems likely that a tiered system of AA triggers, combining local, sub-national and national triggers, will be necessary. Household Economy Analysis (HEA) would also have an important role at this level

if it could be adapted for rapid, local and participatory processes. By the end of the MAM 2020 season, Somalia technical reports were already suggesting that negative drivers would stress livelihoods and nutrition status during the dry season preceding the OND 2020 wet season. As a result, FSNAU and FEWS NET acute food insecurity projections and FSNAU acute malnutrition (AMN) projections for Somalia were pointing to a worsening situation in parts of Somalia (figures 5 and 6). The August 2020 FEWS NET Food Security Alert forecast that the next two wet seasons (OND 2020 and MAM 2021) were likely to be poor. This alert was also a possible trigger for AA between August and September 2020.

The differences between the AMN and AFI current and projected outcomes also raises the question of what the most appropriate AA should be. The drivers of AFI and AMN appear to be influencing current and projected outcomes differently and therefore may require different AA in different parts of the country. The drivers of AFI and AMN appear to be influencing current and projected outcomes differently and therefore may require different AA in different parts of the country.

Figure 5: Somalia acute food insecurity: current, July-September 2020 (left); projection, October-December 2020 (right)

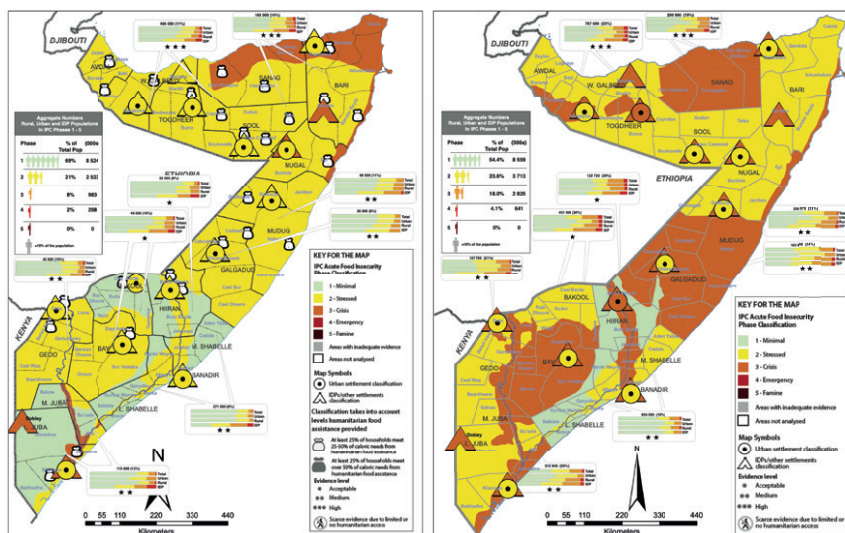
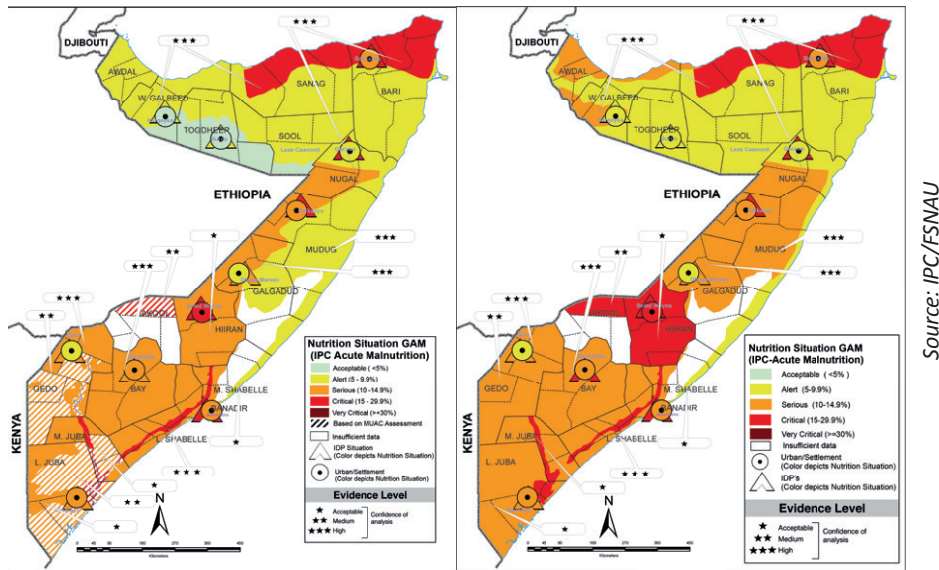


Figure 6: Somalia acute malnutrition outcomes: current, July-September 2020 (left); projection, October-December 2020 (right)

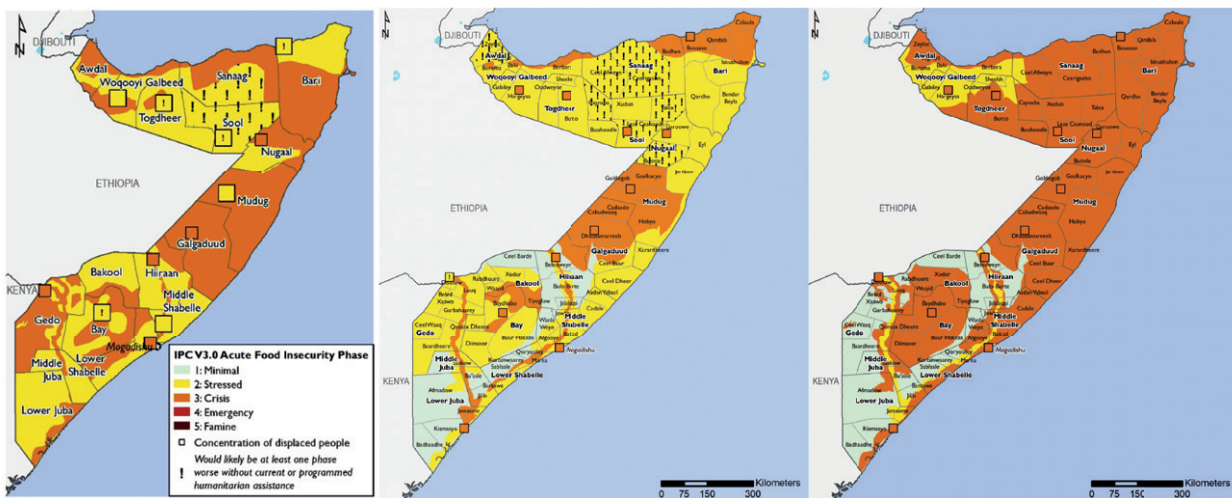


Source: IPC/FSNAU

In Somalia, FEWS NET collaborates with FSNAU to produce joint consensus-driven analysis (as represented in Figure 5 above). However, FEWS NET also does their own analysis of the current situation and projects outcomes into the future (Figure 7). Whilst the two projections both suggest worsening outcomes there are significant differences between the areas highlighted as being likely to worsen and the extent of the country that is likely to experience worsening severity of AFI. It is likely that several other organisations produce their own internal

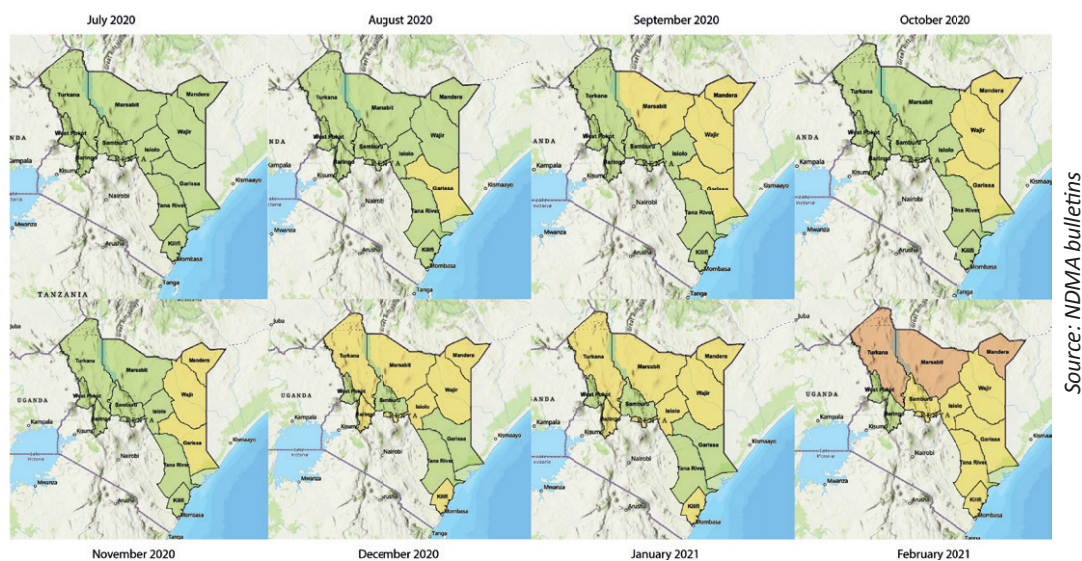
analyses, based on those above but adapted to each organisation’s perspective, experience and expertise, and the scale at which it works. Standardisation is not necessarily a benefit. A danger of consensus analytical processes is that local and organisational experience and perspective is muted in the effort to produce a higher area-level consensus. However, if AA is to be a process that involves specific funding instruments and coordination structures, then local knowledge must be taken into account in decision making.

Figure 7: Somalia acute food insecurity: current, June 2020 (left); most likely scenario 1 (ML1) June-September (centre); ML2 October-January 2021 (right)



Source: FEWS NET

Figure 8: Kenya NDMA drought classifications July 2020-February 2021



Period 2 – Performance of October-November-December 2020 rainfall season

A positive start to the season contrasted with the initial seasonal forecast made in August and September 2020 for a delayed and below-average start to the OND 2020 season (Intergovernmental Agency on Development [IGAD], NOAA/FEWS NET, ASAP) (Figure 9).

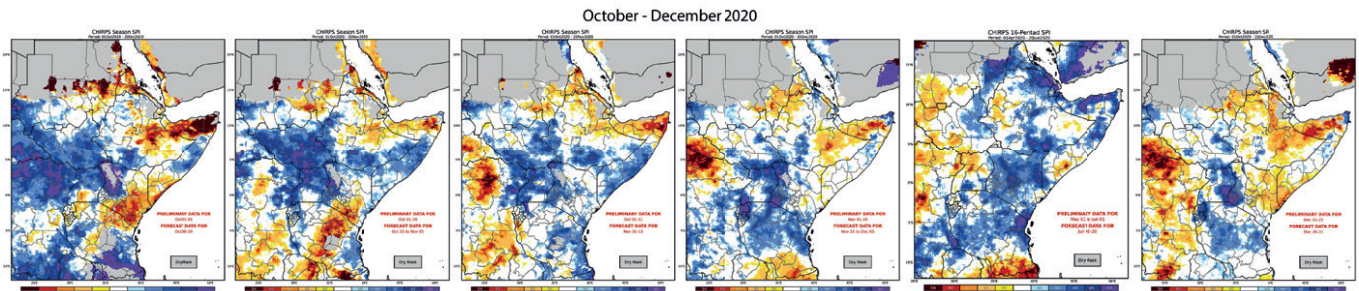
Given the positive start to the OND 2020 season, the October 2020 FEWS NET Food Security Outcome report for Somalia depicted an improved situation compared with the June forecast for October 2020–January 2021. In Kenyan ASAL counties, projection of stressed outcomes through December 2020 remained. By mid-November, rainfall became erratic and poorly distributed, a pattern that continued into December 2020 for both countries (NDMA, United States Geological Survey [USGS]/FEWS NET).

In November and December, ASAP flagged Somalia as a hotspot country, given poor rainfall performance and high water stress levels. In Somalia, the deepest rainfall deficits, 25–50% of average, were in parts of Togdheer, Gedo, and Lower Juba regions (FEWS NET). The poor rainfall performance set expectations for a poor harvest and harsh dry season conditions, including limited pasture and water availability, in January and February, particularly in Central and Southern Somalia (FEWS NET, FSNAU, ASAP). Lastly, in December, forecasts for a below-average MAM 2021 continued. However, the medium-term forecast for the MAM 2021 rainfall performance had low confidence levels. Again, this reinforces the view that **the first two months of 2021 were a possible triggering point for AA.**

⁹ At this time, seasonal monitoring reports indicated that an average to above-average OND rainfall season was possible but still not the most likely scenario.

¹⁰ FEWS NET reports do not provide updated numbers – instead, they often rely on official IPC population tables. Therefore, despite area outcome improvement, the projected people in need (i.e., IPC Phase 3 or worse outcomes) for Somalia remained at 2.1 million through December 2020, with an additional 400,000 in early to mid-2021 (FEWS NET, FSNAU).

Figure 9: Standard Precipitation Index with two-week forecast, October 1-December 20 2020



Source: Climate Hazards Centre

Overall, our analysis classified the rainfall performance and drought conditions as negative in both countries. Crop and livestock prospects were also negative in both, while markets were positive in Somalia but neutral in ASAL counties. Overall, AFI outcomes were neutral for both countries.

Period 2 demonstrates the difficulty of forecasting climatic conditions even for the OND period, which is known to be easier to forecast than the MAM period. Rain forecasts improve in accuracy the shorter the period between the forecast and the actual event. Rains are intermittent and of varying intensity with wide geographic variety throughout the OND season. Reviewing the forecasts and the positive start to OND rains followed by the eventual poor performance of the OND 2020 rainfall season raises further questions for triggering AA.

In Kenya and Somalia, it is a commonly accepted view that two failed seasons are a good and simple marker of a food security and livelihoods crisis. Definitions of AA suggest that AA is to be used to help avert or mitigate a forecasted crisis. Thus, there is a question on whether AA is best triggered to anticipate the impacts of a forecast first or second failed season. If AA is used for any single failed season that is forecast, then the analysis Period 1 above would suggest that AA should have started between the MAM 2020 and OND 2020. If AA is to be used only after a first failed season and a forecast second failed season, then our analysis suggests that AA should have been triggered during the end of the OND 2020 or just afterwards, in early 2021. Therefore, AA actors need to consider what severity of crisis the anticipatory actions are intended to prevent or mitigate.



Source: © Save the Children

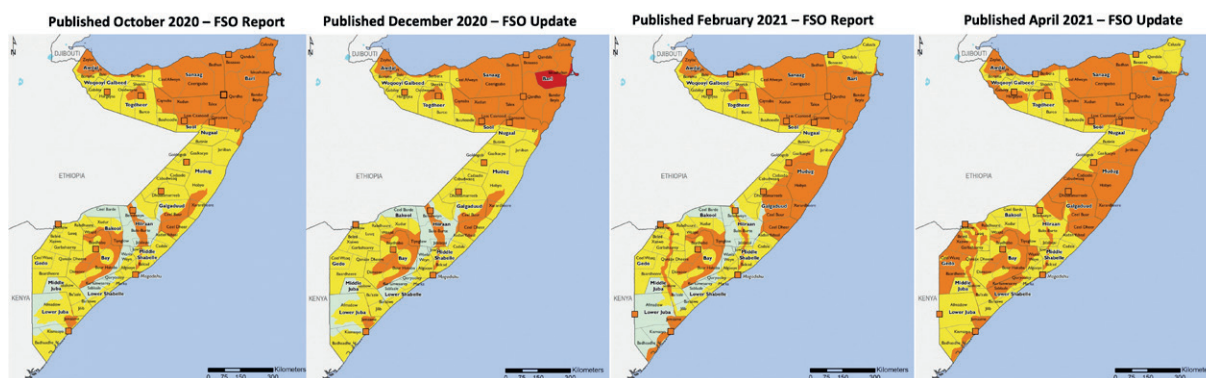
Period 3 –January-February 2021 dry season

In January 2021, seasonal forecasts concluded that the upcoming MAM 2021 rains would most likely be below average, driven by an increased risk of La Niña (NOAA/USGS, ASAP), while ICPAC models concluded that there was an equal chance of below-average, average and above-average rainfall. The increased likelihood of two consecutive poor rainfall seasons, as suggested by the NOAA/USGS MAM forecast, was a key driver of projection of worsening outcomes in the first half of 2021. In Somalia, the IPC, FSNAU and FEWS NET technical reports released between January and February 2021 made projections up until September 2021 (FEWS NET) that suggested that acute food insecurity would worsen across large parts of Somalia. In Kenya, food security reports projected that an estimated 1.4 million Kenyans in arid and semi-arid areas were facing Crisis (IPC Phase 3) or worse outcomes by February 2021, an increase of 93% over the preceding MAM 2020 season (Kenya Food Security Steering Group [KFSSG], FEWS NET). Further, projected outcomes indicated a worsening situation by mid-2021 in Kenya, highlighted by a projected 700,000 increase in the population in crisis or worse from March to May 2021 – a total of 2.1 million people. In Somalia, an additional one million people were projected to face crisis or worse outcomes from February to June 2021 – a total of 2.65 million people (Figure 10).

Overall, our analysis classified the climate and drought conditions as negative in both countries. Crop and livestock prospects were also negative in both. Market dynamics were negative for Somalia yet neutral in Kenya, given above-average staple and goat prices. Acute food insecurity outcomes in Kenya were marked as negative, as the population in crisis nearly doubled from the previous year, while Somalia was classified as neutral, given the reduction in severity of food security outcomes, but with an increasing magnitude of people in crisis, including stable but high global acute malnutrition prevalence.

The retrospective review of the JF 2021 dry season and forecasts and projections for the MAM 2021 rainfall season indicated that in some areas of Somalia, in particular, the negative effects of the poor OND 2020 season were already beginning to be felt by January and February and may reflect some impact of the poor season experienced in these southern parts of Somalia in MAM 2020. **The analysis once again confirms this review’s suggestion that triggering of AA may have been appropriate in December 2020, January or February 2021.** The sparsity of analysis focused on the performance of dry seasons may make it more difficult to make decisions about starting AA during dry seasons. Further, the simultaneous increase in magnitude yet decrease in severity of needs in Somalia adds further uncertainty to decision making during this critical period prior to the MAM season.

Figure 10: Forecasts and projections for January-February dry season and March -April-May rainfall season 2021, and performance of January-February dry season



Source: FEWS NET food security outlooks and updates

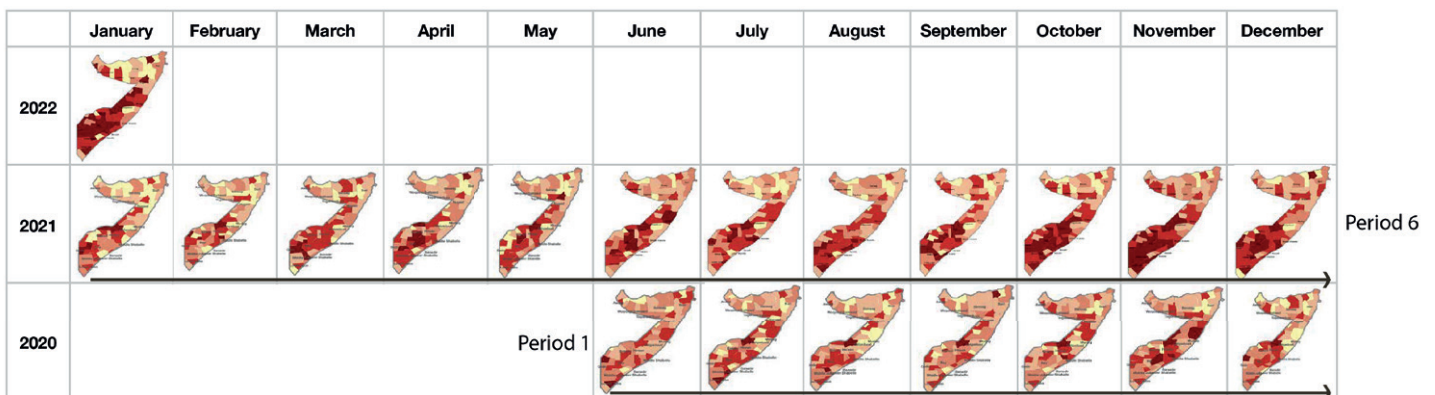
In Kenya, whilst the climatic forecasts were the same as those for Somalia, i.e., poor OND 2020 and MAM 2021 rains, and harsh dry seasons, the projected outcomes for AFI and AMN remained the same for the end of 2020. However, the monthly NDMA early warning and early action (EW-EA) bulletins started to report that ASAL counties were moving from Normal AFI phase into Alert phase in September 2020 (Marsabit, Wajir, Mandera and Garissa) and by February 2021 some counties (Turkana, Marsabit and Mandera) had moved into Alarm phase (Figure 11).

The September move of some ASAL counties from Normal phase to Alert, coupled with the August 2020 forecasts of upcoming poor OND 2020 and MAM 2021 rains, aligns with the suggestion above that AA could have been triggered in Kenya around January/February 2021. These EW-EA bulletins do not project or forecast the future outcomes but only report on the current situation. However, they do represent a more regular local and experiential analysis of the situation than those of the bi-annual long and short rains analysis on which the AFI and AMN outcome projections are based. Consequently, their use in triggering sub-national AA could be further explored.

Period 4 – Performance of March-April-May 2021 rainfall season

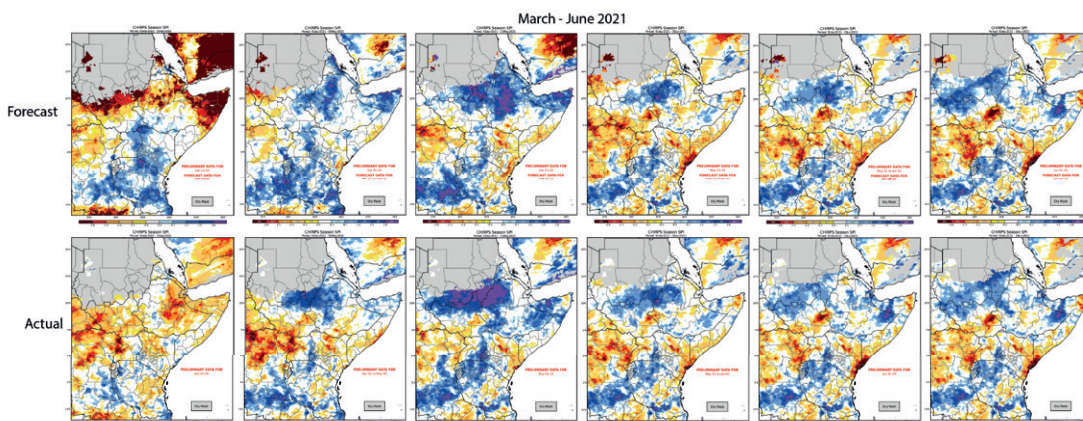
The delayed onset of MAM 2021 rainfall stoked concerns of worse than expected deterioration in outcomes (FEWS NET, FSNAU, NDEW, ASAP). While a short period of heavy rainfall in late April and early May initially eased concerns, by late May, rainfall was erratic and updated forecasts – from both NOAA/FEWS NET and IGAD – concluded that the MAM rains were likely to end early and be below average (Figure 12). In April, the Drought Severity Update from the Food and Agriculture Organization (FAO) project, Somalia Water and Land Information Management (SWALIM), classified a large part of Somalia as in severe drought (Figure 13).

Figure 11: Somalia early warning-early action alertmap, June 2020-January 2022



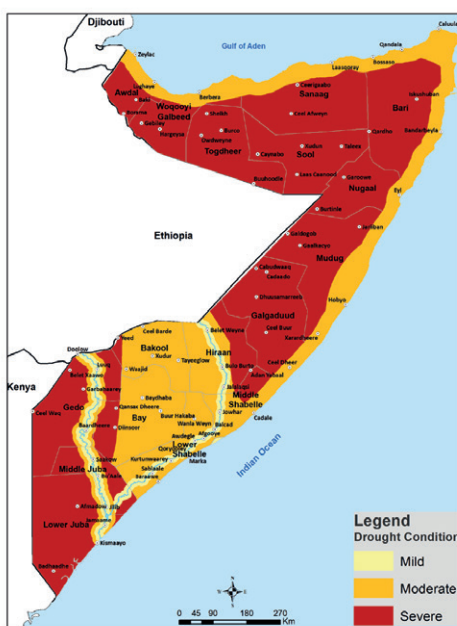
Source: FSNAU

Figure 12: Two-week Standard Precipitation Index forecast compared to actual Standard Precipitation Index, March-April-May 2021



Source: Climate Hazards Centre

Figure 13: Somalia drought update, April 2021



Source: SWALIM

Drought Severity			
DROUGHT CONDITION	IMPROVING	STABLE	WORSENING
MILD Going into drought, short term dryness slowing planting, growth of crops. Also coming out of a drought – water deficits, partial loss of crops and pasture		Juba and Shabelle riverine areas	
MODERATE Some damage to crops, and pastures; some water shortages developing or imminent			Bay, Bakool, Hiraan, Middle Shabelle, Lower Shabelle and Banadir Coastal areas
SEVERE Dried up water sources, severe and widespread water shortage, depleting pasture, limited crop planting and germination, deteriorating livestock body condition, livestock abortion, deaths and culling, pasture losses is likely; water shortages common and water trucking imminent		Coastal areas	Awdal, Wooqoyi Galbeed, Sanaag, Togdheer, Sool, Bari, Nuugal, Mudug, Galgaduud, Gedo, Middle Juba and Lower Juba

Warnings and alerts of a worsening situation

The delayed rainfall in April led FEWS NET to update its projected outcomes map for April–May 2021 and June–September 2021, indicating a worsening situation predominantly in southern Somalia. As early as April 2021, FSNAU Seasonal Climate Updates for Somalia warned that the forecasted below-average cumulative rainfall would likely negatively impact food and nutrition outcomes until the end of 2021. In May, FSNAU followed up with further warnings of prospects for crops, livestock and water. By mid-May, FEWS NET issued a Food Security Alert predicting a multi-season drought that was likely to persist into late 2021, and a significant increase in food assistance needs in the region. Similarly, the Food Security and Nutrition Working Group (FSNWG) also issued an alert in May calling for partners and governments to urgently put in place anticipatory action programmes, including safety nets, to protect affected households from the expected impacts of the ongoing poor rainy season (FSNWG Alert, May 2021). In Kenya, the NDMA depicted the MAM 2021 rainfall performance as relatively positive, driven by some relief in pasture conditions after the brief above-average rainfall in mid-May.¹¹

Overall, our analysis classified the rainfall performance for the MAM 2021 season as negative. Drought conditions were neutral in ASAL counties of Kenya and negative in Somalia. Further, crop and livestock prospects were neutral in Kenya, given slight pasture relief in May, but negative for Somalia. Market dynamics were categorised as neutral in Kenya and negative in Somalia. Acute food insecurity outcomes were negative in

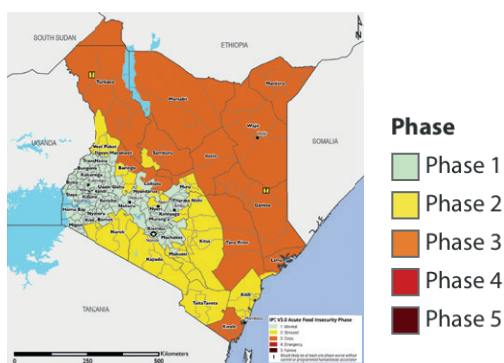
Somalia, depicted by the high likelihood of worse than projected outcomes, whereas, in Kenya, AFI outcomes were reportedly in line with expectations (i.e., neutral).

The review of the MAM 2021 season demonstrated the value of reviewing and reanalysing forecasts and projections regularly, particularly during an ongoing season. With more regular reviews, decisions can be taken to trigger AA in places where the situation has already begun to deteriorate, for example, Southern Somalia, or in places where forecasts and projections suggest that the situation is just starting to worsen, for example, Kwale (Figure 14).

The review also highlights how temporary improvements in rain performance seem to have a disproportionately positive effect on decision makers' view of the performance of the rainy season. In this case, a couple of weeks of improved rains in late April and early May seemed to have reduced attention to what turned out to be a very poor MAM 2021 season.

The review of the timeline since the MAM 2020 season suggests that by the end of the MAM 2021 season there was no longer any uncertainty about the need for AA or early action for large parts of Kenya and Somalia. If AA is broadly interpreted to mean forward-looking action to mitigate future negative impacts of climate on AFI, then the review suggests that AA could still have been triggered at any time from late May 2021 onwards, once the MAM 2021 projections had been confirmed or near-term forecasts suggested that the season would fail.

Figure 14: Kenya IPC projected outcomes, November 2021–January 2022



¹¹ This is despite three ASAL counties being classified as in Alarm phase and 10 in Alert phase in April, and 11 ASAL counties in Alert phase by June (with none in Alarm).

Period 5 – Forecast and projections for July-August-September 2021 dry season and October-November-December 2021 rainfall season

As forecast, the MAM 2021 rains ended early and seasonal performance is considered poor, both in timing and distribution. Further, the June–September Hagaa rains in Somalia were forecast to be inadequate to drive significant recessionary cultivation in riverine areas or recover late long-rain cereal production in coastal areas (FEWS NET July 2021). Due to the forecast of an atypically hotter than normal dry season from June to September 2021, rangeland resources and livestock body conditions were expected to continue to deteriorate (FEWS NET July 2021).

By September, seasonal forecast reports indicate that the upcoming OND 2021 rains were likely to be below average and hotter than normal, especially over the eastern Horn, and likely to result in below-average crop production and short-term improvements in rangeland resources (NDMA, FSNAU, ASAP, FEWS NET September 2021)¹². Further, in September 2021, the Kenyan Government officially declared the drought a national disaster.

In June, reports highlight that, for a third consecutive season in southern Somalia and a second in other parts of Somalia and in eastern and northern Kenya, erratic rains had severely affected crop prospects and conditions for the upcoming dry season (FSNAU, FEWS NET, ASAP, NDMA). By August 2021, areas of southern Somalia including Middle Juba, Gedo and parts of Bay and Bakool were considered the worst-affected areas and categorised with moderate but worsening drought conditions (SWALIM – Drought Conditions August 2021)¹³.

In Kenya, drought conditions in Marsabit and Wajir counties were classified as in Alarm phase but stable for August, while Isiolo, Mandera and Garissa were Alarm and worsening (NDMA August 2021).

The retrospective review of the JAS 2021 dry season and forecast and projections for the OND 2021 season again highlights two important elements.

First, the importance of the analytical links between temporal, geographic and livelihood zone variability and localised data for analysis and triggers. For the fourth consecutive season, parts of southern Somalia experienced a below-average harvest and reduced terms of trade, amongst other drivers of crisis. Other areas of Kenya and Somalia experienced one, two or three failed seasons of varying intensity. However, the poor integration of localised data, knowledge and expertise within a larger AA framework presents a challenge to implementing AA in a more context-specific, nuanced and appropriate fashion.

Secondly, as in the past, the forecasts and projections did quite a good job of predicting a 24-month descent into an ongoing severe crisis but, once again and to a large extent, early warning did not translate into significant early action or anticipatory action. However, the relatively slow-onset and multi-seasonal crises mean that the negative impacts are expected to continue to deepen in severity and magnitude for many months ahead and the longer-term impacts on livelihoods are expected to be seen for even longer. In other words, many of the negative impacts are already “baked in”, independent of the crisis response.

¹² Forecasts of total rainfall amounts from ¹ September through ²⁵ October, including forecasts from 11-25 October 2021, were expected to remain below average in most parts of central and southern Somalia and in eastern, coastal and northern Kenya (NOAA, FEWS NET, FSNAU). This is attributed mostly to the forecast weak La Niña event coupled with the anticipated short-lived negative Indian Ocean Dipole conditions and unfavourable Western Pacific sea surface temperature gradients in the coming months.

While forecasts made earlier in the year, such as the February seasonal forecast, indicated that a below-average OND 2021 was likely, there is higher confidence in forecasts produced one to two months prior to a season.

¹³ For pastoralists and agropastoralists, the positive impacts of heavy rain in May 2021 were short lived, with deterioration of rangeland resources resulting in livestock emaciation and a substantial decline in milk production during the July to September dry season.

3.2 Timeline visuals

Figure 15: Somalia retrospective timeline analysis, March 2020-December 2021

Year		2020												2021												2022							
Season		Rainy Season (Gu; Long)				Dry Season				Rainy Season (Deyr; Short)				Dry Season				Rainy Season (Gu; Long)				Dry Season				Rainy Season (Deyr; Short)			Dry Season				
Period Analysis and AA Value Add		March	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March							
Categories	Rainfall - Seasonal Climate Performance	Near Average*								Below Average				Below Average - 2nd Consecutive Season								Below Average - 3rd Consecutive Season											
	Drought Conditions	Minimal								Moderate				Moderate and Worsening				Moderate				Moderate and Worsening				Severe to Extreme and Worsening							
	Crop Prospects - Short and Long Harvests	Below Average								Below Average - 2nd Consecutive Season				Below Average - 3rd Consecutive Season								Below Average - 4th Season											
	Livestock Conditions	Good								Good - Worsening				Poor and Worsening								Very poor and Worsening											
	Price of Local Cereal	Above Average								Above Average and Decreasing				Above Average and Increasing				Above Average				Above Average and Increasing											
	Price of Local Livestock	Above Average								Above Average and Decreasing				Below Average and Decreasing								Below Average and Decreasing											
	Terms of Trade - Cereal to Livestock	Below Average								Near Five Year Average and Improving				Near Five Year Average and Worsening				Below Average and Worsening															
	AFI Outcomes	Stressed/Minimal Outcomes								Stressed/Minimal Outcomes and Improving				Crisis Outcomes and Worsening				Crisis Outcomes				Crisis/Emergency Outcomes and Worsening											
	AMN Outcomes	Serious								Serious and Improving				Serious				Serious and Worsening															
	Human Migration (Displacement)	Moderate								Moderate and Increasing				High and Increasing																			
Key Forecast, Alerts and Alarms	Measles	Reported Cases Stable								Reported Cases Increasing				Reported Cases Stable								Cases Rising Exponentially											
	Climate Alerts																																
	Livestock Alerts																																
	Crop Alerts																																
	ASAP Alerts																																
	Market Alerts																																
	Disease																																
	Outcomes																																

	Positive		Key period for AA based on current outcomes, trends and forecast
	Near Normal		
	Negative		
	Very Negative		

Figure 16: Kenya retrospective timeline analysis, June 2020-December 2021

Year		2020												2021												2022			
Season		Rainy Season (MAM; Long)				Dry Season				Rainy Season (OND; Short)				Dry Season				Rainy Season (OND; Short)				Dry Season							
Period Analysis and AA Value Add		March	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March			
Categories	Rainfall - Seasonal Climate Performance	Near to Above Average								Below Average				Below Average for Consecutive Seasons								Below Average for Multiple Consecutive Seasons							
	Drought Conditions	Minimal								Mild				Mild and Worsening				Mild				Moderate and Worsening							
	Crop Prospects - Short and Long Harvests	Good								Average and Worsening				Poor				Poor for Consecutive Seasons				Poor for Multiple Consecutive Seasons							
	Livestock Conditions	Good								Average and Worsening				Poor and Worsening				Average and Improving											
	Price of Local Cereal	Below Average								Near Average and Increasing				Above Average				Above Average and Increasing											
	Price of Local Livestock	Near to Above Average								Average and Decreasing				Below Average and Decreasing															
	Terms of Trade - Cereal to Livestock	Near to Above Average								Average				Average and Worsening				Below Average											
	AFI Outcomes	Stressed								Stressed/Crisis and Worsening				Crisis				Crisis and Worsening											
	AMN Outcomes	Critical								Critical				Critical															
	Key Forecast, Alerts and Alarms	Climate Alerts																											
Livestock Alerts																													
Crop Alerts																													
ASAP Alerts																													
Market Alerts																													
Disease																													
Outcomes																													

	Positive		current outcomes, trends and forecast
	Near Normal		
	Negative		
	Very Negative		

4. Early warning and anticipatory action systems in practice

4.1 Early warning forecasts and projections have improved and are considered credible

Key findings

A large amount of data for forecasting and projecting is collected, collated across many sectors and disciplines and used for early warning purposes to varying degrees.

- The data is increasingly analysed using common analytical frameworks (ICPAC and FEWS NET).
- Analysis is trusted, well communicated and used in decision making, particularly within the humanitarian cycle.
- Analysis and related decision making is gradually being owned and led by governments and there is evidence of local NGO and community participation and inclusive decision making in some areas in both countries.
- Forecast and projection platforms are successfully using technology, learning and technical improvements to increase confidence in their analysis.
- Increasing availability of data and analysis across sectors and disciplines is allowing greater capacity to triangulate and a more nuanced picture of the impact of climate shocks on more parts of people's livelihoods.
- There is a persistent disconnect between informal and formal systems, with informal systems performing well but not effectively integrated into the formal system.

Early warning systems in Somalia and Kenya can be broadly divided into two often weakly linked sub-systems: formal and informal. Formal systems are managed or jointly managed by the international community or government (national and regional). Examples include ICPAC, Meteorological Institutes, the NDMA, FSNAU, FEWS NET, etc. The second sub-system might be described as local informal systems. The local level consists of locally based individuals and groups, and social networks that extend from

local to international. Locally based individuals and groups range from communities, local (district, sub-county, ward) government and informal authorities such as faith groups and local business-people. Social networks (clan, tribe, political or faith-based) extend from individuals through communities to local urban areas to large cities and outwards to diaspora communities. Many clans and tribes have traditional early warning methods that feed into the wider informal system (Box 2).

BOX 2: Traditional early warning systems

Communities in Somalia have over the years developed their own traditional early warning systems using indigenous knowledge. These include observation of changes in weather patterns, the levels of water in natural water bodies and animal behaviour. Communities closely monitor fluctuations in the amount of precipitation received during the Gu and Deyr seasons, how the rains started and how harsh the preceding dry season was. Animal behaviour, for instance, the movement of crocodiles and hippos from waters and migration of certain birds, was indicative of impending droughts or flooding. Pastoral communities that are nomadic in nature are said to be the most reliable sources of traditional EWS as they rely on such prediction to inform their movement. LNGO key informant interview, Somalia

In Kenya, the ASAL Humanitarian Network, with 30 member organisations in 12 counties (but only active in 10), attempts to bring convergence of indigenous insight, scientific knowledge and early warning information to communities and other end users. LNGO key informant interview, Kenya

In general, stakeholders reported that, in late 2020 and 2021, the formal EW system performed well, as it did in 2016–17 and 2010–11. However, the systemic problem of early response lagging behind early warning was noted by many. Key informants were equally split on whether more information reduced or increased uncertainty in decision making. The formal systems were reported to have improved, particularly in technical sophistication and in being embedded into the international humanitarian response cycle and in the Kenyan Government system. There were also reports of greater involvement of the Somali Federal and state governments in the use of forecasts and projections for decision making.

In Somalia, the Federal Humanitarian Affairs and Disaster Management Agency (HADMA), the Ministry of Planning, the Ministry of Agriculture and the Ministry of Water are all reported to be particularly involved in the collection, collation, analysis and use of early warning data.

In Kenya, there is universal acceptance and use of the NDMA drought surveillance system and its monthly collection and analysis of a combination of indicators to produce a warning in four phases (Normal, Alert, Alarm and Emergency). Most stakeholders consider this system as “good enough” and there is wide confidence in it.

Both government and non-government actors in Kenya consider analysis in the monthly bulletins and the seasonal assessments as providing early warning. Many referred to the movement from Alert to Alarm as a trigger for action. Stakeholders felt that the communications of projections and forecasts had improved in the last few years. Communication systems for forecasting and climatic performance platforms were identified as being very useful, with increased ability for users to make their own analysis and to follow a wider range of indicators.

Local government and other food security actors inclusion and participation in the analysis and the use of the consensus approach to analysis by the IPC (FSNAU, KFSNWG) are all reported to be increasing the confidence of early warning stakeholders in the analysis.

For example, nine Somalia government agencies and many international and national NGOs participated in the FSNAU assessments and analysis. Progress has also been made in the building of consensus around the findings by paying more attention to inclusiveness, transparency and the participation of local and international organisations in the validation process for IPC type analysis.

Communication of forecasts and projections was reported to have improved, particularly communication within the formal system of government and international agencies. Availability, transparency and usability of forecast data and analysis was identified as a particular success. Web-based communication of forecasts and projections was reported to have improved in sophistication and usability. A wide range of communication media were reported to be used for dissemination, including social media, press releases and SMSs, and presentations in the formal coordination mechanisms.

Fewer communications channels between the formal and informal systems were reported, although many stakeholders noted that there has been investment in improving this with projects such as the Foreign Commonwealth and Development Office (FCDO)-funded Weather and Climate Information Services for Africa (WISER)¹⁴.

During the current drought, there were very few reports of incidences where the informal system influenced the formal system, although stakeholders in Gedo reported that community committees were working together with the State Government to develop early warning messaging (Box 3).

Formal to informal communications channels include the use of community dialogue forums to relay alerts and warnings. The NDMA EW-EA bulletin alerts are disseminated through the NDMA and through government sub-county teams' interaction with community groups. International and national NGOs also report using forecasts and projections in their communications with communities and community groups. The impression is there is still significant work to do in developing the two-way communication systems between formal and informal EW systems.

“...the early warning information is both useful to the policy makers or the government and non-state actors, it's equally useful to the community. Now there is no linkage, because the community don't have a platform where they can access this information to make an informed decision.”
Key informant, February 2022

BOX 3: Community-based early warning systems in Somalia

There are also established, community-based disaster risk reduction/EWS committees who have over the years received capacity-building training and been equipped with EW tools by different NGOs. These committees fill in monthly reporting tools that track fluctuations in risk factors at the community level and also report on real shock and magnitude of impact.

Community elders are also regarded as important sources of warnings and alerts. Other informal sources of warnings include communities from neighbouring countries like Ethiopia and Kenya, who alert communities downstream when they see an indication, for example, rising water levels in a river. The community responds by acquiring [moving] farm equipment like water pumps and other valuable equipment to stay away from the riverbank.

¹⁴ See Gbetibouo, et al., 2017 for more on the outcome of Kenya projects under WISER.

Formal systems produce forecasts for up to 12 months ahead and are linked to projections of food security and nutrition needs for up to 12 months ahead. There are two main forecasting models (Box 4). The two main forecasting platforms often agree but at times there are differences in their forecasts, particularly for the probability of an above-average, below-average or average wet season for a MAM wet season. The forecasts converge as they come closer to the actual season and through the season. FEWS NET, NDMA/KFSSG and FSNAU use the IPC analytical framework or an IPC-compatible approach, ensuring harmonisation

of projection analysis and reporting. Yet differences in interpretation of the same available data remain, resulting in projections that differ in geographic and temporal predictions of the magnitude and severity of acute food insecurity impacts in both countries. Many organisations also reported that they use the national projections for an overall picture but do their own analysis at organisational or local levels, for example, the World Food Programme (WFP) – Vulnerability Analysis and Mapping (VAM) and Save the Children – HEA and Cost of Diet.

BOX 4: The two main forecasting models

Forecasting approach 1 (i.e., FEWS NET model):

The **North American Multi-Model Ensemble (NMME)** combined with the **Climate Hazards Center** at the University of California, Santa Barbara, Experimental Seasonal Forecasts.

The Climate Hazards Center provides a variety of products for users, including seasonal forecasts, intra-seasonal forecasts, and 15-day forecasts. All include key climate indicators, such as rainfall, temperature and soil moisture, as well as indexes like the Standardized Precipitation Index (SPI).

The NMME project includes nine models, resulting in a total of 118 ensemble members. Previous studies have found that multi-model ensembles are better at forecasting climate and allow for better characterisation of prediction uncertainty (Kirtman et al. 2014, Shukla et al., 2016). The Climate Hazards Center converts these forecasts into seasonal percentile/SPI and then maps them to allow for easy visualisation and application. These model results and information products produced by the Climate Hazards Center are synthesised by USGS (a FEWS NET science partner) to produce tailored agroclimatology. Unlike other forecasting models, the Climate Hazards Center Experimental Seasonal Forecasts use a mixture of both quantitative modelling (i.e., NMME) and domain expertise through use of analogue years to adjust models to reflect the realities and difficulties associated with seasonal forecasting for the Horn of Africa. See <https://blog.chc.ucsb.edu/?p=1100> for additional insight into this approach.

Forecasting approach 2 (i.e., ICPAC model):

The **IGAD Climate Prediction and Application Centre (ICPAC)** is also considered a leading source of climate forecast products for the region. Unlike the FEWS NET model above, the ICPAC model relies almost entirely on quantitative modelling via the **Weather Research and Forecasting Model**, an open-source modelling platform. As a result, models are not adjusted using domain expertise and analogue years to mitigate against modelling error. Similar to the Climate Hazards Center, ICPAC provides timely forecasts, both seasonal and intra-seasonal, during key rainfall periods such as MAM and OND.

Both forecasts and projections are regularly updated. Forecasts are more regularly updated than projections, as often as hourly, but many reported that constantly changing forecasts added short-term uncertainties when making long-term decisions. For example, good rains were experienced for two weeks in the middle of the MAM 2021 rains after three to four weeks of poor rains. Informants reported that pressure to take action built in the first weeks of the season, only for two good weeks to deflate the pressure and move attention on to other priorities. Updating of projections can range from yearly to quarterly updates or ad hoc updates for sudden or unexpected shocks, but not more regularly. In highly complex, fragile and volatile contexts with overlaps of livelihood shocks and unexpected events, projections are seen to date quickly. Differences in interpretation of data used for forecasting and projections, and too-infrequent updates or too much attention given to very frequent updates, were all reported to increase uncertainty in making longer-term decisions about early action. On the other hand, some reported that having more information and analysis helped their organisations to triangulate and to make more informed decisions.

Several individuals reported that there is a food security and rural bias to the analysis of climate shocks on livelihoods and a related bias of focusing on climate forecasting of livelihood shocks, as opposed to forecasting other shocks

that could drive livelihoods into crisis, for example, conflict, epidemics and pandemics, and cross-border political and economic shocks. FSNAU and the NDMA also analyses the nutrition situation using the IPC AMN protocols, and projections are made for nutrition needs alongside those made for food security needs. The 2020–21 timeline analysis developed for this paper highlights the differences in patterns of acute malnutrition and food security as a result of climate shocks in both countries.

FAO SWALIM in Somalia manages a system of flood and drought early warning (Figure 17). SWALIM also produces two reports each season: a climate forecast report, and an ex-ante analysis report on whether rains were above normal, normal, moderate, below normal or failed. The two reports are compared and produce a report triggering an alarm. SWALIM also regularly updates a drought index (based on compound indicators) which is used to assess the severity of the drought and produce a drought bulletin after failed rains. Stakeholders reported that these early warnings, projections and drought and flood assessment reports were very useful and gave an additional perspective to the predominantly food security perspective of the systems described above. Both FSNAU and SWALIM are completing Phase 1 of integrating into Somali Federal Government systems within the National Bureau of Statistics in the Ministry of Planning.

Figure 17: SWALIM drought bulletin, December 2021

Drought Severity		
DROUGHT CONDITION	IMPROVING	WORSENING
NORMAL <i>Normal conditions</i>		Awdal and Woqooyi Galbeed and parts of Togdheer
MILD <i>Going into drought,. Also coming out of a drought – water deficits, partial loss of crops and pasture</i>		Pockets of Togdheer and Bari regions and north western coastline
MODERATE <i>Damage to early planted crops, reduced land cultivation, and shortage of pastures and water</i>		Sool, Sanaag, coastal of Shabelle and Juba and parts of Bari and Nugaal regions
SEVERE <i>Crop or pasture losses is likely; water shortages common and water trucking imminent</i>		Parts of Lower Juba, Bay, Bakool, Hiraan, Mudug, Galgadud, southern parts of Bari and Nuugal regions
EXTREME <i>Major crop/pasture and livestock losses; widespread water shortages and water trucking</i>		Gedo, Middle Juba, and parts of Lower Juba and Bay

Other sector or subject matter information systems related to early warning exist (markets, protection, migration/displacement). In Somalia, the Norwegian Refugee Council monitors indicators on protection and coping mechanisms (assets), and the WASH Cluster (supported by REACH) monitors water prices.

The Ministry of Labour, Youth and Sports Puntland, together with HADMA and FAO with other NGOs, conduct assessments on drought severity and the hotspot areas. The Ministry of Public Works and Reconstruction monitors food security, livestock, water levels, and displacements. WFP's VAM unit conducts its own analysis and contributes significant data and analysis to national food security analysis mechanisms. Save the Children uses HEA and Cost of Diet. All of these systems have their proponents, either because of their own particular organisational, sectoral or cross- sectoral interests or for triangulation purposes. The proliferation of these systems demonstrates that data collection, collation and analysis of specific areas of interest is not a significant problem, although gaps do remain.

In many of these systems, particularly the map-based systems, the analysis of the impact of climate shocks on gender and social inclusion issues is reported to be very weak.

Two respondents reported that analysis of social capitals' impact through local, sub-national and international networks is undervalued. The increased use of standardised technical approaches to analysis and demand for evidence-based programming has resulted in a significant focus on quantitative analytical processes as opposed to qualitative data collection and analysis.

The increasing technicality of these analyses has also created a gap between users and analysts in understanding the limitations and meaning of the forecasts and projections, with many of the key informants unable to give clear reflections on the usefulness of the technical analysis.

One respondent pointed out that an FSNAU report can be more than 100 pages long. The increasing technicality and depth of analysis tends to alienate decision makers and reduce the influence of the data.



Source: © Save the Children

4.2 Challenges remain in interpreting and using early warning analysis to trigger anticipatory action

Key findings

Early warning and early action gaps remain a significant barrier. The barrier is related to early action systems issues but also to a number of factors related to the way that the early warning systems work:

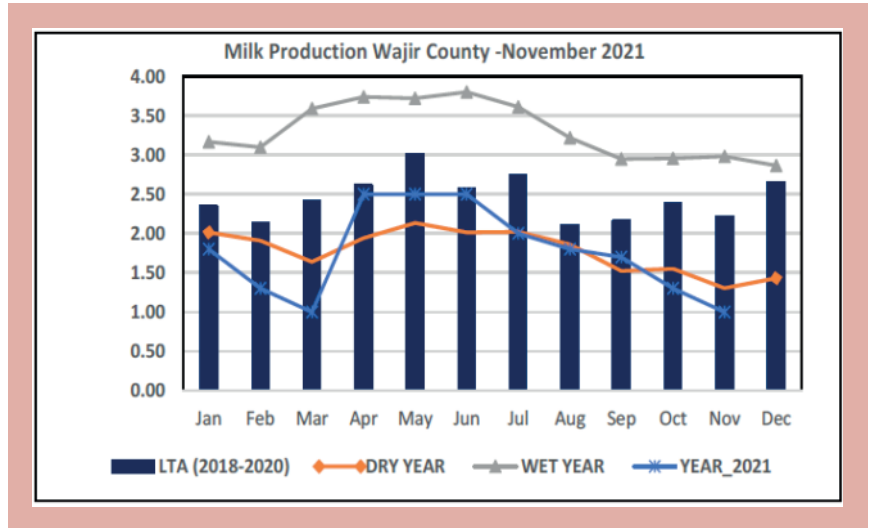
- There is uncertainty about triggering early or anticipatory action in complex contexts such as Somalia and the ASALs of Kenya where climate shocks are just one variable in how livelihoods systems are absorbing, adapting and transforming. Currently, early warning systems tend to use a linear or circular perspective of a drought being an event with three stages – before, during and after, resulting in a continuum model of drivers of outcomes and types of responses from AA, through response to early recovery.
- IPC type analysis tends to report needs in only two categories: Phase 3 and above, and Phase 4 and above. Much less attention is given to actions in Phase 2 (Acute food insecurity), where anticipatory actions would perhaps be most useful, and responses above Phase 3 are more standardised with little consideration of the different types and timing of needs in Phase 3 or Phase 4
- Early warning systems give significant weight to climate shocks' impact on rural populations and food security elements such as impacts on markets, production, access to food and food consumption. As a result, the more complex issues of social networks, intra-household factors, health, nutrition, WASH, urban populations, gender and social inclusion (to name a few) tend to be downplayed in the analyses and as a result in the response planning, whether that be anticipatory or full crisis response planning.
- More data, more sophistication of analysis and more analytical frameworks increase the nuanced understanding of the dynamics of the crisis but also increase the gap between analysis and decision makers' understanding and ability to make appropriate decisions.
- More data and analysis also increases the possibility of divergence in forecasts and projections, reportedly resulting in less understanding, confidence and use of the analyses.
- The desire and demand for evidence-based programming and the increasing sophistication of analysis has resulted in much more value being given to quantitative analysis at the cost of many lost opportunities to use qualitative information to improve the analysis.
- Regular updates are seen as both increasing and decreasing uncertainty. On the one hand, the complexity and volatility of the context demands regular updates and on the other

Since 2014, the NDMA has produced monthly county- and sub-county-level EW-EA bulletins in the 26 ASAL counties. The bulletins use a tiered classification system with four tiers ranging from Normal to Crisis. The bulletin contains in-depth analysis and uses a range of indicators collected from sentinel sites and analyses using seasonally adjusted normal range values, for example, milk production normal range >1.4 litres (Figure 18). Indicators cover biophysical, production, access and utilisation domains with limited inclusion of nutrition and water indicators. Human health indicators are not included. All Kenyan stakeholders reported that the monthly bulletins play a significant role in triggering action at county and national level and also inform local-level decision making. However, other systemic issues meant that the translation of an EW-EA alert into actions is often delayed, and the process is unclear and politically influenced.

In 2014, FCDO supported FSNAU and OCHA to develop and report on a multisectoral EW-EA dashboard for Somalia with an accountability framework to address warning to action gaps. An Oxfam discussion paper in 2017 highlighted a number of areas for refinement of the EW-EA dashboard (Feeny, 2017). Many of these observations remain valid in 2022, in particular, the observation that the EW-EA dashboard struggles to influence decision-making processes because its objectives, early warning or timely response, are unclear and as a result the system still has very little buy-in from decision makers.

The FSNAU EW-EA dashboard does not have thresholds at which to trigger actions but many others do, including the NDMA EW-EA monthly bulletins and IPC-compatible analysis and projections. However, respondents reported that there is a tendency for only the most severe

Figure 18: NDMA drought bulletin – milk production trends



classifications to trigger action. Less severe classifications, where anticipatory actions might be expected to be most appropriate, do not seem to have early actions attached to them. According to one expert, the Government of Somalia does not use tiered thresholds with linked actions. Although some thresholds were established after 2011, the Government does not yet have the capacity to monitor them.

The actual thresholds themselves are seen to be very high so that, by the time they are reached, the affected population already needs major response and it is too late for anticipatory or early action. The IPC-compatible analyses of FSNAU, NDMA and FEWS NET use tiered classification systems with clearly defined thresholds to move from one classification of severity to the next. Nevertheless, in recent years, these systems have tended to report needs in only two categories: Phase 3 and above, and Phase 4 and above. As a result, much less attention is given to actions in Phase 2 (Acute food insecurity), where anticipatory actions would perhaps be most useful, and responses above Phase 3 are more standardised with little consideration of the different types and timing of needs in Phase 3 or Phase 4.

Respondents reported that the increasing politicisation of climate shocks has resulted in much more attention to early warning and earlier action by politicians. For instance, respondents noted that both national governments were seen to have declared a drought emergency earlier than in the past; Kenya did so in September 2021 and Somalia in April 2021. Kenyan county steering groups made decisions that resulted in earlier dispersal of contingency funds by members of the county assemblies. At the national level, social protection safety nets (such as the Hunger Safety Net Programme [HSNP]) and national drought contingency funds and national budgets were redirected to the early response as early as June 2021. On the other hand, the increased political

attention resulted in more disputes about the use of early warning for the targeting of aid, the timing of aid and budget disbursements, and the meaning of the early warning – all being seen through a political lens – and this was exacerbated by elections in both Kenya and Somalia.

“There is a general denial of early action, especially among government. Most people value what they are seeing, not what they are being told will come.”
Key informant, February 2022



Source: © OXFAM

4.3 Government and international aid systems favour early shock response rather than anticipatory action

Key findings

- Despite the demonstrated value of forecasts in predicting heightened risk of food security crises, and the clear advantages of AA, decision making and triggers are still linked to emergency response.
- Anticipatory action is still relatively new and many stakeholders were more comfortable talking about early action systems or preparedness rather than forecast-based or anticipatory action.
- In Somalia, the existing strategy for action is highly shock responsive and only springs into action once a crisis has emerged and funding becomes available.
- There is evidence that models for AA (including national protocols for forecast-based action and shock-responsive social protection) are being developed and institutionalised.
- Systems for the governance of anticipatory action seem to be missing in both countries. Existing systems for early warning and early action are more orientated towards triggering and coordinating emergency response. Stakeholders reported that AA mechanisms in different organisations operate in silos and there is a need for more harmonisation and coordination.
- The Ending Drought Emergency programme in Kenya includes frameworks to enable earlier drought response and has resulted in emergency policy and disaster risk management bills to enhance accountability, which are being passed by counties. Despite some challenges, this is one of the few examples of a systems approach to enable action aimed at reducing the impacts of predictable climate shocks.

The literature addressing AA demonstrates the advantages of anticipatory action but also highlights some of the challenges and barriers that remain. IGAD's Climate Prediction and Applications Centre (ICPAC), through the Forecast-based Preparedness Action (ForPAC) project, the FAO, and the Kenya Meteorological Department have demonstrated the value of engaging with anticipatory action, whether defined as FbA or early action (ICPAC, 2021; FAO, 2018; Funk, 2020; Mutua, 2020). Studies focused on climate/weather forecasts demonstrate that rainfall observations over a six-month period can credibly indicate heightened risks of hazards and food insecurity and guide short- and long-term AA decision making (Coughlan de Perez et al., 2019; UKRI, 2022).

Other literature found that despite the clear advantages of AA, challenges remain. For example, preventable emergencies related to food security are likely to persist if disincentives for AA, such as performance indicators related to spending rather than savings and intangible impacts, remain, and decision making related to drought crises continues to be oriented around emergency response rather than AA that proactively utilises climate/weather forecasts (Hillbruner and Moloney, 2012; ICHA and KRC, 2019; Bulle, 2021).

Key attributes needed to effectively transition from response to AA are organisational adaptiveness and adaptive capacities of all stakeholders (Obrecht, 2019).

The term “anticipatory action” is still relatively new and many stakeholders talked about early action systems or preparedness rather than forecast-based or anticipatory action. In Somalia, there was a consensus that the government lacks a system for AA. The existing strategy for action is highly shock responsive and only springs into action once a crisis has emerged. Although models exist in a number of international non-governmental organisations (INGOs) and UN, there was no evidence of these systems operating in practice. Few respondents were able to describe a systematic process of monitoring, triggering and early action based on the theoretical models that have been published. Instead, respondents reported an iterative system of monitoring early warning information, verifying it with assessments (including HEA) and deciding on action based on availability of finance.

Despite the lack of evidence of AA systems there are examples of good practice where elements of AA have been developed and used.

Kenya Red Cross (KRC) developed early actions in partnership with the International Federation of Red Cross and Red Crescent Societies (IFRC) and other stakeholders in the last five years. These protocols specify when early action should be triggered, for example, when there is a high potential of the event occurring. They have created checks and balances so that, for instance, the likelihood of an event should be high enough not to be abused and activated every season. Validation of data is done to ensure accurate outcomes and actions are informed by the thresholds used. These specific drought protocols have been developed as an extension of the FbF that the Red Cross / Red Crescent movement has been piloting for a number of years.

Some INGOs have emergency preparedness or contingency plans which include a monitoring matrix based on a selection of indicators. Passing thresholds on specific indicators triggers early action. In practice, once thresholds are passed, country offices look to their headquarters or regional offices to support action based on established plans, but the scale of support rarely meets expectations and action is often a small fraction of what was planned.

Early warning triggered “surge” or scaled-up action through expansion of existing development and resilience programmes in Kenya, for example:

- Shock-responsive social protection – specifically, horizontal and vertical expansion of existing systems (HSNP and Kenya Sanitation and Hygiene Improvement Programme)
- Re-purposing of development/resilience funds, including funds allocated by the Bureau for Humanitarian Assistance (BHA) for local partners and INGOs to respond in food security, WASH, livelihoods, livestock support at an excess of USD 34 million in 12 counties, reaching one million beneficiaries, and the Building Resilient Communities in Somalia (BRCiS) consortium’s EW-EA system (see Box 10).
- HEA is seen to be a useful tool in AA systems to ensure better design and targeting of the action to the sectors and populations needs (Box 5).

BOX 5: Use of Household Economy Analysis

Save the Children in Somalia and Kenya use HEA outcome analysis (OA) to understand the current and projected levels of food and income deficits in different regions, and when the deficits will likely be experienced. In Somalia, the HEA analyses in 2020-2021 showed that in some areas, populations were already facing deficits, meaning the window for anticipatory action had already passed. However, for other regions, HEA did identify windows for actions.

HEA OA is useful to identify hot spots but in Kenya, HEA data availability is patchy compared to Somalia, where Save the Children and partners have achieved almost national coverage. This means it is possible to compare the current and projected food security situation in different livelihoods, to prioritize areas for fundraising and action, and for reallocation of programme funding to act in anticipation of a crisis.

In Kenya, Save the Children completed HEA OA in Turkana, Wajir and Samburu counties in October 2019 and again in August 2020, and decision makers were able to compare their results. Achieving full data coverage in Kenya would enable a more comprehensive comparison of different livelihood zones to identify hotspot districts.

Systems for the governance of anticipatory action seem to be missing in both countries. Existing EW-EA systems are more orientated towards triggering and coordinating emergency response. These systems can be flexible and adaptable for

AA (see Box 6 on the KFSSG) but, overall, stakeholders reported that AA mechanisms in different organisations operate in silos and there is a need for more harmonisation and coordination.

Box 6: Coordination by the Kenya Food Security Steering Group

Kenya has a well-established structure that coordinates all food security-related issues: the Kenya Food Security Steering Group (KFSSG), chaired by the government through the NDMA and co-chaired by WFP. The KFSSG has other key sectors: agriculture, livestock, water, health and nutrition, and education. Before planning food security assessments, the KFSSG builds scenarios based on the current situation. These are usually prognoses and assumptions that project for the next six months. Food security assessments are usually general – they do not have thresholds. Food consumption and care and coping strategies are monitored. The Hunger Safety Net Programme (HSNP), being implemented by NDMA in Isiolo, Tana River, Garissa and Samburu, follows the same system. One drawback is that the HSNP only uses the information for the project and don't use it to enrich existing assessments.

In Kenya, the NDMA works with the county steering groups (CSGs), co-chaired by the county governors and county commissioners. Contingency plans for water, livestock, and food assistance are activated when there is a trigger. The NDMA has contingency funds for these plans, which allows counties to institute initial or urgent interventions to mitigate the problem early. Partners work with drought management teams at the county level. The KFSSG gets updates on what is happening and provides feedback. It is also a way to avoid duplication of resources with other NGOs.

In Somalia, stakeholders reported a lack of coordinated efforts between Government and non-government actors, with disconnects between different community-based approaches initiated by NGOs, locally driven resource mobilisation and relief efforts, and national coordination with donors led by HADMA and UNOCHA. There was also limited evidence of knowledge sharing and transfer of learning between Government and non-government actors as well as between geographical areas and programmes.

In Kenya, stakeholders feel that coordination has greatly improved at national and county level with the Government taking the lead and duplication avoided. In the past, some households would

receive funding from multiple sources and others would get nothing. Coordination ensures that all areas are covered.

However, there was also an overfocus on some counties like Turkana, while others like Wajir and Marsabit were left out. Strong coordination at the national level ensures there is engagement with humanitarian actors. There have been several high-level meetings where the Government presents what they have done so far and discloses how resources have been spent. However, many stakeholders also suggested that there is a need for much greater accountability and transparency in how government funds for drought action are spent at both county and national level.

At the regional level, the NDMA works with IGAD countries within the eight pillars of the Ending Drought Emergency (EDE) framework, which include human capital, livelihoods and disaster risk reduction (DRR) (Box 7). This has led to a clear response. At the national and county levels, frameworks to enable earlier drought response and emergency policy and disaster risk management bills to enhance accountability are being passed by counties. This is one of the few examples of a systems approach to enable action aimed at reducing the impacts of predictable climate shocks.

Box 7: Learning from Ending Drought Emergencies, 2013-20

The mid-term review for EDE identified some clear successes but also some challenges in institutionalising drought risk management:

- EDE succeeded in getting resilience to drought into planning but sector-specific planning and fund allocation at county level did not follow.
- There is good understanding of the need for multi-stakeholder collaboration but county governments are not sufficiently engaged.
- Policy and institutional frameworks for drought risk management have been established (NDMA and NDEF).
- Coordination of drought resilience and response has strengthened but there are parallel systems emerging, which brings confusion.
- County government sectors are too focused on short-term investments so are not allocating funds to risk reduction.

4.4 There is evidence of strong capacity and resources for anticipatory action in local and informal systems, but gaps in operationalising system-wide thinking remain

Key findings

- Approaches where implementers of AA worked closely with local communities were shown to be instrumental in addressing food insecurity, livestock loss and reduced livelihoods.
- Most respondents in Somalia reported that community-based systems were the fastest to respond in the event of a crisis (for example, BRCiS).
- Informal coping mechanisms have played a critical role in alleviating challenges faced by households in Somalia in the face of complex, co-occurring, intersecting and recurrent humanitarian needs.
- While examples of strategies to link up informal mechanisms for mobilising resources and taking early action with formal response systems, including AA, exist, there is limited evidence of this working in practice.
- Local NGOs and local governments have played a stronger role in early humanitarian action in this drought across both countries.

The success of any AA relies on systemic understanding of the stakeholders, communication processes, framework, data management, monitoring and evaluation systems, and climate/weather forecasts, but also of the more hidden elements of a social ecosystem such as traditional and cultural beliefs, political goodwill, power dynamics and knowledge gaps (Konrad-Adenauer-Stiftung and, 2016; ICHA and KRC, 2020; UKRI, 2022; Duguma, Bruntrup and Tsegai, 2017). An example of a systems or holistic approach is the inclusion by World Vision International of three key components of AA—collection, translation, and recommendations: 1) collecting and analysing early warning data; 2) translating this data into early action strategies via clearly

articulated decision making and knowledge management; and 3) communicating these recommendations/strategies to a range of key stakeholders (World Vision UK and IRI, 2016). Similarly, the World Bank posits that a systems approach involves AA on three fronts. The first front consists of regional collaboration at institutional and policy levels. The second entails mitigating the challenges of geographic isolation and neglect by investing in basic infrastructure and social service projects. The final front relates to sustainability and the need for ongoing capacity building for formal and informal governing institutions, as well as consistent engagement with peacebuilding and conflict transformation initiatives (Vemuru, et al., 2020).

Approaches where implementers of AA worked closely with local communities were also shown to be instrumental for addressing food insecurity, livestock loss, and reduced livelihoods.

Partnerships with local communities, local and national governments, and the private sector are key to leveraging collaborative AA. An important component of partnerships though is having a strong framework.

In Kenya, the EDE framework helped coordinate work with communities to get ahead of the anticipated 2018 drought by distributing livestock feed before a crisis developed. Private enterprises also assisted with funding and purchasing livestock during the drought (Mutua, 2020).

Since 2017, the Kenya Red Cross has implemented community engagement and accountability mechanisms to collaborate with local communities, FEWS NET, and the NDMA. Some of the early action consisted of financial appeals, developing targeting criteria by pre-registering vulnerable households in drought-prone zones, and the distribution of multi-purpose unconditional cash transfers (KRC, 2019).

Most respondents in Somalia reported that community-based systems were the fastest to respond to a projected crisis. Response took the form of either relief itself or resource mobilisation by organising for contributions. Contributors include:

- Family members of affected households
- Local leaders
- Islamic leaders
- Community-based DRR committees
- Business community
- Diaspora community

The government was mentioned as the slowest responder to crisis due to the low capacity of relevant institutions. Humanitarian organisations were also thought to be slow responders due to the protocols involved in obtaining resources for action and other inefficiencies such as last-minute submission of proposals despite the existence of contingency funds, crises modifiers, and preparedness plans.

In Kenya, several key informants reported that at local level, there was community-based knowledge that enabled communities to take anticipatory action, for example, starting to move their animals to better pastures across the border to Somalia and Ethiopia. Others felt that an appreciation of community-based warning systems, enhanced with formal warning systems, would have added value to the overall system and enhanced levels of accuracy. For example, an integrated early warning platform that uses a dashboard for various aspects of the same emergency would have created a one-stop shop and central depository for all warnings and enhanced both uptake and lead time.

Over the years, informal coping mechanisms have played a critical role in alleviating challenges faced by households in Somalia in the face of complex, co-occurring, intersecting and recurrent humanitarian needs. Traditional cash and in-kind safety nets such as sadaqah, afur and zakat, among many others, have seen the community mobilise resources to support households experiencing higher levels of socioeconomic inequalities. Diaspora contributions have by and large also served as a central lifeline in helping families survive shocks. However, the pandemic severely affected the cash flow from the diaspora.

Local NGOs (LNGOs) and local government have played a stronger role in AA and humanitarian action in this drought across both countries. LNGO key informants emphasised the fact that they are close to the communities and can see the indicators of an emerging crisis earlier than other aid actors. The investment in capacity building of LNGOs and in developing a strong network has greatly increased the reach and impact of limited resources for INGOs, such as Oxfam GB.

The ASAL Humanitarian Network (AHN) in Kenya was able to mobilise early action and successfully lobbied for national action (box 8).

Box 8: Case Study – ASAL Humanitarian Network, Kenya

AHN has 30 members. The network is present in 12 counties but active in 10. They use their local knowledge and scientific knowledge to take early warning information down to the community level. For example, during their assessments they ask communities if they are seeing the early warning signs reported by the NDMA and others, and what the signs mean to them so that the AHN can triangulate formal EA information with local knowledge and observations. The AHN's social media account runs campaigns and is followed by 650,000 Kenyans. It was therefore instrumental in highlighting the worsening of the drought situation by tracking trends and giving press and briefing statements. It lobbied the president to declare the drought a national disaster early. It distributed cash transfers worth USD1.8 million, reaching 5,000 households in eight counties, including Wajir. Cash transfers started in July in Isiolo and Marsabit, based on a prioritisation exercise conducted by AHN. The network also distributed animal feeds and repaired strategic boreholes. Other actions included tracking of worsening trends and issuing press statements and briefing statements.



Source: © OXFAM

4.5 Small-scale forecast-based financing has demonstrated impact but it is not widely available for the majority of actors

Key findings

- Evidence shows that early interventions using FbF have an immediate and significant return on investment.
- In this region, the most common source of financing for AA in response to early warning is the contribution from community members. Other stakeholders (government and NGOs) did not have access to dedicated funds for AA.
- Response actors report limited willingness or flexibility for repurposing funds (from both donors and governments). Although donors do seem to have demonstrated willingness in both countries, the bureaucracy around this is still too heavy.
- There are many examples of prepositioned resources for drought, including contingency funds and crisis modifiers, but the trigger for release is the emergency, not the forecasts.

FbF is a component of AA and represents a programming approach which leverages predefined access to humanitarian and emergency funding to initiate early action. Using in-depth forecasts, weather data and risk analysis, FbF aims to anticipate disasters, mitigate their impact and reduce human, livelihood and livestock losses. A key part of FbF is the necessary frameworks that guide the allocation of funding in conjunction with specific thresholds and forecasts that trigger the release of financial resources to implement early action (ICPAC, 2021; ICHA and KRC, 2019; RCRC, 2020). Evidence shows that early interventions using FbF have an immediate and significant return on investment. FAO's work in northern Kenya has demonstrated that every US dollar spent on early action gained a return of nearly USD3.50. This value was attributed to the extra milk produced and the value of livestock saved or in improved condition (IGAD, 2020). A Save the Children International (SCI) study explored a wider understanding of beneficiary outcomes and included social impact alongside economic benefits of FbF. Findings show early action shielded beneficiaries from the worst and most damaging effects of shocks, with a positive return on investment of GBP1.61 for every British pound

spent (Atkinson, 2018). Importantly, early action benefited households even if the predicted crisis did not materialise.

Many stakeholders commented on the lack of an earmarked budget line for AA and limited willingness or flexibility for repurposing funds. Although donors do seem to have demonstrated willingness in both countries, the bureaucracy around this is still too heavy. In Somalia, stakeholders reported some use of contingency funds within international projects (including the large World Bank funded programmes) but it takes time to negotiate so funds are usually only available for early response. There was also some reallocation of budget (including from the Government) but again it is difficult to get approval so it is usually only reallocated in response to emergency. In Kenya, the NDMA drought contingency funds were requested and used for early response action in July 2021 but not for anticipatory action in 2020 or early 2021. Some respondents thought this was because the protocols for release of the funds require counties to demonstrate that a drought emergency is already occurring.

Households and communities in drought-prone areas demonstrated their capacity to mobilise capital to protect their livelihoods and this is the most evident form of anticipatory action and FbF. In Kenya, pastoralists have their own systems for assessing the likelihood of drought and take a series of actions in anticipation (see Wajir case study, Box 9). In Somalia, nationwide drives to

raise money to help affected households have been organised through the use of electronic media. The business community and the diaspora are also key contributors. Respondents in Kenya noted that private donations are not well coordinated and tend to directly benefit individual households or clans, leaving others with less social capital unsupported.

Box 9: Case Study – Wajir, Kenya: Local community observations, mobilisation of credit and early actions

Discussions with local community representatives indicated that they saw signs of the current drought as early as late 2020. As a result of these local observations, local communities reported that they acted early to some extent. For example, pastoralists used their local observations of water availability to decide whether or not to migrate and whether or not to truck in water. They sent scouts to other areas for direct observation of the quality of pasture and water in order to decide whether or not to migrate. Scouts trekked long distances or hired motorbikes to do the observations and report back. Pastoralists also used the local observations to sell their animals or to organise water to be trucked in. They mobilised relatives and traders to bring them water on credit and buy inflatable water tanks. The arrangement would normally be that a trader who was known to a pastoralist would provide them with commodities and sometimes buy water for their animals on credit with the agreement that the pastoralist would sell some livestock, after it rained and the animals' conditions improved, to pay off their debt. Farmers, on the other hand, started growing fodder to sell when natural pastures were depleted. They would then bring the fodder to water points to sell. They said this was community driven and based purely on local forecasts.

Most respondents confirmed that there are no funds earmarked for anticipatory action. As such, the trigger for resource mobilisation, not resource allocation, is the emergence of a crisis. Some of the reasons provided that prevent predisposition of funds by the government include:

- Late and reactive resource mobilisation approach: resources only mobilised after occurrence of an emergency
- Political instability affecting domestic resource mobilisation
- Lack of locally generated funds when it comes to fundraising
- Global pandemics (COVID-19) that result in limited resources

WFP and the United Nations Children's Fund (UNICEF) have pre-positioned stocks but the trigger for release is the emergency, not forecasts or projections. Humanitarian organisations like NGOs and INGOs have a small portion of their contingency plans specifically within the long-term/resilience projects to respond in case of an emergency (for example, BRCiS) although respondents reported that it was barely enough (Box 10).

Box 10: BRCiS Somalia early action financing model

The consortium piloted a safety net project integrated with its resilience interventions providing regular and predictable cash (USD20 per person per month) with an early action scale-up option allowing for shock-responsive vertical and horizontal expansion, up to a maximum total of USD 40 per person per month in the case of vertical expansion. The pilot targeted a diverse set of livelihoods groups and residential settings consisting of pastoralists, urban poor, agropastoralists, riverine communities and urban internally displaced persons.

The consortium adopted a shock-specific EW-EA framework to inform the pilot and had agreed thresholds to trigger either actions within the community or the activation of a crisis modifier financing mechanism. The data is collected on a monthly basis by the target communities using 30 common agreed indicators. Severe instances call for the activation of a crisis modifier financing mechanism in the case of bigger demands. Since 2019, BRCiS has used the crisis modifier approach three times in reaction to drought, flooding, and the socioeconomic consequences of COVID-19.

OCHA is managing an anticipatory action pilot funded by the Central Emergency Response Fund (CERF), which triggered in 2020. Funds were disbursed to UNICEF, the International Organization for Migration (IOM), the World Health Organization (WHO), United Nations High Commissioner for Refugees (UNHCR), WFP and FAO. A range of activities were supported, based on a pre-defined AA plan. Although the aim was to anticipate the drought impacts and act ahead of

the emergency, in practice, many of the activities were continuations of existing programming. There also seems to have been some difficulty in absorbing the funds as activities using the 2020 AA funding were still ongoing in December 2021 after a drought emergency had been declared. A documentation of lessons learnt highlighted some successes but considerable challenges in the way the pilot was implemented in Somalia (Box 11).

Box 11: Lessons learnt from 2020 CERF anticipatory action pilot in Somalia

Lessons were learnt about the need to start by identifying feasible AA interventions, assessing operational readiness and disaster-specific needs, and building the AA plan and trigger from there. The framework did not include a drought-specific trigger, which led to ambiguity when the food security-based trigger was reached due to other threats. Findings also pointed to a need for greater clarity on trigger monitoring, scenario and protocol development. Finally, the study found that partnership with the World Bank offered prospects for expanded funding but also came with challenges, including differences in institutional readiness for FbA.

4.6 Action taken by most stakeholders was more appropriate to relieving the impacts of the drought than protecting assets and strengthening systems

Key findings

- Local community representatives in Kenya felt the response to the current drought has been less effective than previous ones. The reason, they said, was mainly **problems regarding transparency and accountability**.
- Responses were **primarily reactive rather than forecast-based** with a focus on affected geographical regions.
- In Somalia, **targeting has improved and is based on a transparent beneficiary selection process**. The selection process and dispatch of awarded assistance is highly collaborative.
- Stakeholders are still struggling to understand **what action is appropriate in anticipation of a crisis** and this is further complicated when the food security crisis is caused by multiple shocks and some populations are already in IPC Phase 3 before a crisis is forecast.
- Aid organisations in Kenya were honest enough to agree that **they had not taken any anticipatory action**. They felt that they had responded early to the early warning systems (NDMA bulletins and seasonal forecasts) but the action taken was to relieve the already escalating drought impacts.
- There have been several initiatives to strengthen shock-responsive social protection (SRSP) in both countries and these have huge potential for AA. However, stakeholders feel that this has been **too little, too late**, in contrast to 2016–17 when early action was thought to have prevented a deterioration into emergency for many households.



Source: © OXFAM

Somalia

Evidence suggests that the earliest action was taken by local leaders and community groups. Funds were mobilised through diaspora networks and local fundraising and used mostly for water trucking to allow pastoralists to keep livestock in grazing areas and relieve the burdens of water collection for women. The first responder in the Gedo region was the government, even before NGOs intervened. Even though the government did not have enough resources to intervene, the willingness to make a quick intervention brought the crisis to the attention of national and international communities. Then the government took on the role of coordination with INGOs, UN and humanitarian/development partners.

There have been several actions taken by Government, non-governmental organisations and the community in general to relieve the effects of drought, although a few respondents felt that the efforts have not been significant. Most of the respondents also expressed concerns that the responses were primarily reactive rather than forecast-based, with a focus on affected geographical regions. These responses can be categorised into three main areas:

1. Structural interventions
2. Supply of humanitarian aid to affected households
3. Livelihood protection programmes combined with lifesaving efforts, including water trucking and distribution of fodder

The type of action taken by most stakeholders (including CERF-supported AA) was more appropriate to relieving the impacts of the drought than protecting assets and strengthening systems to prevent or lessen the impact.

One highly experienced informant noted that the actions reported under AA funding were cash transfers, water trucking, drought-resistant seeds and tools, and the actions reported under early response were cash transfers, water trucking, drought-resistant seeds and tools. This suggests that actors still struggle to understand what action is appropriate in anticipation of a crisis. This is further complicated when there is a protracted crisis with many households permanently in IPC Phase 3, compounded by multiple threats (locusts, COVID-19 and drought), as was the case in 2020–21.

Informants in Somalia reported that, in general, actions are targeted according to a transparent beneficiary selection process. The beneficiary selection process and dispatch of awarded assistance is highly collaborative. Decisions take a bottom-up approach, starting with close consultation with village leaders, and follow due process to the donor level. Approved assistance is implemented with guidance from the village disaster committees and selection is based on household economic status.

The significant investment in shock-responsive social protection systems, specifically the World Bank-supported Baxnaano SNHCP, started in 2019, and the EU-funded Sagal social safety net, started in 2021, appears to provide some opportunities for AA and the pilot scale ups in 2020 and 2021 are being documented elsewhere. Stakeholders feel that this has been too little, too late, in contrast to 2016–17 when early action, predominantly in the form of cash transfers, was thought to have prevented a deterioration into emergency for many households. SRSP is still seen as a reactive tool for a shock event rather than a proactive tool to prevent loss of livelihood and welfare.

Kenya

Similar to Somalia, the earliest and most anticipatory action was locally driven. Individual households and communities made decisions and adapted their plans according to forecasts and their traditional EWS. This action was later supported by local NGOs within an overall programme by the ASAL Humanitarian Network, distributing cash transfers worth USD1.8 million from July 2021 and reaching 5,000 households in eight counties, including Wajir (see Box 8 on AHN on page 31). Similarly, county governments took action before the declaration of a national emergency, mostly scaling up HSNP payments and trucking in water. This was financed by the counties' own 2% emergency budget allocation but also by requesting drought contingency funds from the NDMA. Again, most of the action taken was in response to existing drought impacts (for example, water trucking) rather than action to prevent these impacts.

Many aid organisations in Kenya were honest enough to agree that they had not taken any anticipatory action. They felt that they had responded early to the early warning systems (NDMA bulletins and seasonal forecasts) but the action taken was to relieve the already escalating drought impacts. Some actors talked about ongoing resilience activities which could be "repackaged" as anticipatory action, such as WFP working with Wajir County, SCI and KRC to support growing of fodder in advance of a drought so that pastoralists can feed their livestock when rainfall is below average.

Stakeholders agreed that the action that was taken was relevant in that

- Actions were informed by a process that was backed by scientific data and institutional memory of droughts in the various areas.
- Finance mobilisation was informed by the prepared contingency plans.
- Action was dictated by the warning stage.

The NDMA identified hotspots (Alarm, worsening Alert, Level 3) in 23 ASAL counties. Some of these were already known in advance because the areas without permanent water supplies typically become the hotspots. Wajir, Wajir West, Wajir North and Wajir South were the worst affected in terms of severity of the drought while in Kwale, two sub-counties, Kinango and Lunga Lunga, were the most affected. This allowed county governments to target actions to the worst- affected populations.

Discussion with local community representatives revealed that they felt the response to the current drought was less effective than previous ones. The reason, they said, was mainly because of problems of transparency and accountability. They thought that there were more resources now but they were not equitably distributed. They claimed that resource sharing was not based on transparent needs assessment but on political interests and that communities with influential politicians got the biggest support.

In contrast, county officials believed that the response to the current drought was timely and effective because of the existence of county governments with their own budgets and mandates to allow early response to drought-affected people in order to minimise depletion of household assets and protect lives and livelihoods. In addition, they mentioned that the CSG played a pivotal role in collating and sharing early warning information as early as possible which helped both county government ministries and other partners to act faster.

4.7 Conclusions on enablers and barriers for early warning and anticipatory action

Enablers

The increasing sophistication of early warning forecasts and projections of outcomes, together with more and more technical and quantitative data and analysis across sectors and disciplines, has improved the accuracy, scope and availability of early warning information. This has increased confidence in early warning information systems.

EW-EA embedded in existing systems produced some opportunities for AA, such as county-led DRR linked to county-led contingency funds and plans, leading to coordinated action and avoiding duplication, the scaling up of social protection and safety nets to boost cash transfers, and the existence of active, community-based DRR/EWS committees, trained and equipped with tools for early warning and linked to NGOs for support to action (in Somalia).

Disaster response infrastructure has been established and strengthened (all levels).

There are well-established and universal systems for drought EW-EA in Kenya led by the NDMA:

- o KFSNWG coordinates at national level and brings together information from ICPAC, the NDMA and FEWS NET.
- o County steering groups coordinate and respond to early warning – this is mostly an inclusive process (all sectors and UN/NGOs).
- o The EW-EA systems are considered “good enough” by most actors although more real-time monitoring than forecast and not easily accessible/usable to communities.

There are clearer responsibilities for early action in Kenya. Counties recognise they are the first responders. At the beginning of devolution, there was confusion over whether counties or national government were in charge. Counties are now fully in charge.

Data from good analytical approaches, such as household economy analysis, adds to the early action indicators and feeds into IPC analysis, which helps to better manage the scale and magnitude of the crisis.

Regular communication of early warning through CSGs and using the right channels to communicate to the community are best practices. However, in Kenya, the technical NDMA bulletin needs to be unpacked into a language and form that can be easily understood and distributed to the community in a form that that explains drought progression in their own words.

Development/resilience funds (for example, BHA allocated funds, World Bank and FCDO/BRCiS) have been or are being repurposed for local partners and INGOs to respond in good time and appropriately to triggers. But care is needed to protect resilience funding and not undermine resilience gains by diverting funds.

Barriers

More sophisticated and complex early warning systems have increased decision makers' uncertainty over triggering early action, including anticipatory action. Climate shocks such as drought are superimposed on other shocks and stresses and vulnerabilities and vary in severity over time and geographically, increasing the complexity of the decisions that need to be made.

The formal system of decision making is still struggling with taking "no regrets" decisions early enough and in the appropriate places for the right population groups and with appropriate actions. Many factors contribute to this but for humanitarian organisations and governments, prioritising of funding for tangible emergencies is still the key driver. Informal EW-EA systems, in contrast, have consistently managed to respond early and are sensitive to geography, especially in Somalia.

Gaps remain in how the informal system addresses social exclusion and gender and makes decisions about appropriate responses because it not guided by a formal protocol.

Between the formal and informal systems there are significant communication gaps in both directions and there are missed opportunities to harmonise and upscale the informal response systems.

Stakeholders cannot easily distinguish between forecast-based/anticipatory action, early action and early response. Timelines of emerging crises are complicated and there are no obvious thresholds or triggers. Most AA was actually early response (timing and type of action), and resilience, AA and system strengthening all seemed to merge, but there are positive moves towards institutionalising AA (for example, the Danish International Development Agency [DANIDA] project in Wajir and the OCHA/CERF initiative in Somalia). However, significant reflection is necessary to better define triggers, timing, etc., to ensure true AA.

The formal system is highly shock responsive rather than forecast based. Stakeholders are monitoring indicators, but thresholds are set at "shock" levels so most action is early response, not anticipatory action.

There is a question as to whether AA could have been triggered for Southern Somalia as soon as the possibility of drought became clear in June or July 2020. This point, in turn, raises a more general question about at what scale, national, sub-national or local, AA systems aim to operate. Whilst forecasts and projections are available at scales below national or sub-national level, doing specific analysis for all these smaller-scale areas would involve significantly more analytical capacity than is currently available. At very local scales, this data and analysis is not always available. If AA is to be triggered at very local levels, then it is likely that, in the absence of locally detailed forecasts and projections, these triggers will need to be mostly based on local knowledge and experience. If the ambition is to use AA at a variety of scales, then it seems likely that a tiered system combining local, sub-national and national AA triggers will be necessary.

There are weaknesses in the coordinated efforts between Government and non-government actors in Somalia: 1) There is limited evidence of knowledge sharing and transfer; and 2) there are few examples of community-based approaches harmonised between Government and non-government actors.

In Kenya, there is a disconnect between AA and the NDMA National Drought Fund, creating confused or uncoordinated channels of resource flows. Many development donors do not have prearranged crisis modification funds, which is a major gap: early warning does give the alerts but there is no funding until the actual crisis is witnessed and major losses have occurred. Funds should be allocated within government budgets before the alert as fundraising may take several months before funding is available.

There are limited funds available for AA, while humanitarian funding is insufficient to meet current emergency needs.

- o Resource constraints remain the biggest issue. Most organisations have limited contingency funds available, usually capped as a percentage of programme budget and earmarked for emergencies.
- o Donor systems are still not tailored to act on forecasts, with most donors only providing resources once the emergency has already occurred, and they rarely fund anticipatory action.
- o Although counties in Kenya have budgets for emergency response, these are very limited (2% of county budget), and the counties need convincing to allocate some of the emergency budget for AA.

Development of siloed and uncoordinated AA systems have created a series of un-harmonised systems which could work better if they were connected. There are at least six different threshold/triggering systems in Kenya, which can cause confusion and prevent more effective and efficient responses.

The strongest evidence of anticipatory action, early enough to be ahead of a potential crisis, is action driven by local decisions and local fundraising. There is a disconnect between this and the formal EW-EA systems led by national governments and international actors. There are missed opportunities for contingency planning to include support to locally driven anticipatory action.



Source: © Save the Children

“There is a general denial of early action, especially among government. Most people value what they are seeing, not what they are being told will come.”

Key informant, February 2022

5 Reflections on changes since 2010 and uptake of the Dangerous Delay recommendations

The study explored what changes have taken place since the 2012 Dangerous Delay report, specifically looking at the following key recommendations (summarised) and the extent to which they have been taken up by development and humanitarian actors in Somalia and Kenya:

- Do not wait for certainty before responding.
- Develop a common approach to triggers and early action.
- Provide political leadership for drought response (especially in devolved government in Kenya).
- Allow for adaptable long-term development approaches.
- Undertake preventative humanitarian work (“no regrets”, resilience strengthening).
- Integrate risk management into systems (people and organisational structures).
- Develop more agile and flexible funding mechanisms among donors.

5.1 Manage the risks, not the crisis

As discussed in the earlier section, evidence from the last two years suggests that most organisations have not yet developed systems to do this. Despite considerable commitment to anticipatory action at the global level, the actors on the ground have found it very difficult to operationalise this. Fundamentally, systems in both government and NGOs are orientated to trigger financing and response based on indicators that demonstrate an existing crisis. Reliance on humanitarian funds to be released for anticipatory action based on forecasts has been challenging. Development programmes have potential to flex and release funds based on forecasts and early

warning but, in most cases, this is still small scale (less than 10% of annual budget) and procedures for repurposing the funds are cumbersome. Pilots for AA at scale (for example, CERF- and World Bank-funded AA in Somalia) have struggled with contradictory triggers and unclear objectives, leading to action which isn’t really designed to protect livelihoods and welfare. This raises the question of whether AA models are really fit for purpose for managing the risk.

5.2 Earlier drought response

Political leadership for drought response is one area of improvement since 2011. In Kenya, the development of the EDE framework is being cascaded down to counties. Some counties have disaster management units and policies. Coordination was very poor bad in 2011 – stakeholders didn’t know who was doing what and where. The 2017 drought also had coordination challenges but coordination is well defined in the EDE framework. Resource allocation is also defined where, per the EDE, government should put in KES1.6 billion against KES1.5 billion from donors, and county governments have allocated 2% of their budget for emergency response. In some counties this was released ahead of the emergency declaration so it could be considered early drought response but not anticipatory action. There have been major changes in government in Somalia since 2011, with more stability and the formation of state governments, some with their own disaster management authorities. While systems are far less developed than the NDMA in Kenya, there has been considerable investment in setting up shock-responsive social protection, which provides opportunities for early and rapid drought response.

International aid organisations have taken on board the Dangerous Delay recommendation to develop systems for preventative humanitarian work with multi-year, multi-agency programmes such as BRCiS and the Somalia Resilience Programme in Somalia, and the USAID Partnership for Resilience and Economic Growth framework providing a resilience lens to all their programming in ASAL areas. There are fewer examples of risk-informed development programming, with EDE in Kenya and the SRSP pilots in both countries being the exceptions. The determination to act early, with “no regrets”, was demonstrated in the swift and early response to the 2016–17 drought and many actors believe this prevented the development of a major crisis in Somalia in 2017. Rapid staff turnover and short institutional memory (together with many other factors discussed in this report) meant that humanitarian actors have been more reluctant to apply a “no regrets” approach to the 2021–22 drought.

Donors believe they have made considerable progress in making funding more flexible and extending humanitarian funding into multi-year, resilience-orientated programming. Other actors argue that there is room for more flexibility and many respondents in Kenya and Somalia criticised both government and donor systems for being too slow to release funds in response to early warning. Expansion and/or repurposing of development funding is still tied to evidence of a crisis that has already developed, rather than forecasts of deteriorating conditions.



Source: © Save the Children

6 Recommendations to strengthen anticipatory action

6.1 Develop a common vision and strategy for anticipatory action in different contexts

All key informants were clear that anticipatory action means responding earlier in anticipation of future impacts of the climate crisis but were not clear about how AA related to a continuum response model including DRR, early action, early response and full response. Many respondents reported activities which were labelled as being anticipatory action but struggled to explain how the actions were differentiated from DRR, early actions, early responses or even actual responses. Some actions were labelled AA because the grant was called AA but funds were being spent late into 2021 and early 2022. Others reported repurposing or relabelling resilience, development or humanitarian grants to be, or at least appear to be, more forward looking. As a result, this study struggled to collate and describe clear examples of anticipatory action.

This lack of clarity on a shared vision of the objectives of AA results in missed opportunities to realise the full value, and hopes, of using AA approaches.

Uncertainty around three issues seem to be at the core of this problem.

1. What size and type of crisis should we be anticipating? – How big, in terms of severity and magnitude, should the impending climate crisis be to trigger an AA response? Climate shocks are a constant experience at local levels with significant variation in performance of the season even when, overall, the season is classified as a good or normal season. Is the objective of an AA system to respond to local climate variability in order to anticipate the longer-term negative impacts on livelihoods in these communities? Related to this point, “two failed wet seasons” is a widely accepted rule of thumb for a large -scale food security crisis. Should AA be triggered before the first or the second failed wet season or be based on predictive impact analysis, not meteorological information? In the recent experience of 2020 and 2021, a first AA trigger point would have

been when forecasts of a failed OND 2020 season became more certain in July to September 2020. A second trigger point would have been in February or March 2021, once it became clear that forecasts were for a second failed season. Vulnerable populations of the two countries constantly face overlapping crises that evolve rapidly or slowly and interact in new or unexpected ways. Unexpected crises, such as COVID-19, are also a feature of the region. In this region it makes sense for AA systems to be designed for all types of crises.

2. What is the best timing for AA? – There is confusion about whether AA is the first step in a continuum of response followed by early action, early response and response. There is also confusion over how DRR and AA relate. Some respondents reported that they were doing AA even in very late 2021 and early 2022. In their view, this type of AA was in anticipation of the situation getting even worse. In other words, they were putting more emphasis on forward-looking actions to anticipate a future escalation of food insecurity as opposed to early anticipation of a crisis.

3. Where in the international aid system and crisis response system should AA be situated? – Respondents had different views on where in the humanitarian/development nexus AA fits. Is it more of a development responsibility, similar to DRR, is it more of a humanitarian action, similar to early action, or is it both? Other debates revolved around whether AA should be a separate funding stream (and project or programme) or embedded in existing response and development systems. This debate also encompasses the international aid system’s aspirations for the localisation of AA with governments, civil society and sub-national formal and informal representatives of communities.

Whilst the process of refining a common vision for AA and its objectives and purposes is emerging from recent experience, this review in Kenya and Somalia points to the need to integrate AA into existing structures of government, development, resilience and humanitarian programming and community-based systems. Doing so would avoid creating new structures, new funding streams and new debates on the value and objectives of AA. All opportunities to respond earlier and anticipate future worsening crises should be harnessed rather than delegating responsibility to another structure or process. It is not unreasonable to think that all these systems should be forward looking in a context of ever-increasing frequency, diversity and severity of crises. In 2020 and 2021, lack of clarity on organisational, project and programme responsibility for AA contributed to many missed opportunities which are being keenly felt as the crisis accelerates in 2022. Having AA as a principle for strengthening the shock responsiveness of all these systems would also allow AA to be more flexible, able to respond to many and any type of impending crises at the same time and at most stages of a crisis, not just at the beginning of visible crises, such as droughts, floods or locusts, and to many more small and medium-sized crises.

Harmonising and integrating funding streams for AA should also be part of the wider system strengthening. Clearly linking release of contingency budgets, crisis modifiers and the World Bank Crisis Response Window to support decisions on scale up of appropriate action in collaboration with other actors would strengthen the impact and prevent loss of livelihoods and assets at scale.

In 2021, both informal and formal EW-EA systems had successes in responding early and appropriately. Many of the strengths of one are weaknesses of the other. There is much to be gained from paying more deliberate attention to ensuring that representatives of informal AA systems participate in and are included in decision making and leadership of formal systems of AA. Much more two-way communication will help formal systems to respond earlier and more appropriately. It will also help informal systems' early responses to be more appropriate and to target some of the most vulnerable but least powerful.

6.2 Localise anticipatory action

Forecast-based triggering of AA – Explore opportunities to better link local and national or international triggering of an appropriately timed and targeted choice of anticipatory actions. Systems for forecasting a climate shock have greatly improved since 2011, as have the national-level systems for forecasting or projection of the impact of the climate shock on food security. However, the processes by which a climate shock translates into negative impacts on food insecurity are complex and very context specific. So national systems tend to overgeneralise and, as a result, uncertainty about triggering AA at a national scale is high. This contributed to national-level decisions to trigger anticipatory action being mostly delayed at the end of 2020 and throughout 2021.

The experience, knowledge, capacity and agency to take contextually appropriate anticipatory action is found at the local level, from sub-national to community level, and in the informal system. Sub-national and local anticipatory actions were taken in 2021 but, at least within the formal aid system and governments, uncertainty about systems such as funding and contractual flexibility reduced the scale of these initiatives, i.e., many local informants reported that they knew something should be happening late in 2020 or early 2021 but were not sure how, or they felt constrained to use the system to do something about it. As much of the informal Somali response does not rely on international and national formal structures, anticipatory actions were taken but the international system, for the most part, remained divorced from Somali decision making at the beginning of the response and indeed are still, to a large extent, operating separately from the informal response.

Potential areas for further research and learning

In Kenya

Explore in depth how the triggering of NDMA drought response funds and county contingency funds could happen earlier at county and sub-county level. For example, in addition to using the NDMA EW-EA bulletin as a trigger, could climate forecasts be used more to trigger AA before negative changes are flagged by the EW-EA bulletin?

Explore how international actors can better engage with Government systems for early response and anticipatory action, including for triggering AA, to decide how best to provide technical assistance, capacity strengthening of the system and individuals.

Study how forecasts, projections and systems such as the NDMA early warning bulletins can trigger a more holistic and anticipatory (forward-looking) package of innovations, for example, paying more attention to health, nutrition, gender, social inclusion, social capital and issues in addition to water trucking, livestock offtake and livestock forage.

Investigate how AA action can be triggered in counties and sub-counties of the country that are increasingly affected by climate shocks but do not traditionally have the systems and attention to trigger significant early or anticipatory action, for example, arid parts of coastal counties, counties like Kitui and counties on the border with Tanzania.

In Somalia

Explore in depth how the Somali response, the diaspora, businessmen and religious networks decided to respond to the climate crisis in late 2020 and through 2021. Conduct action research on approaches to collaborating with Somali response systems to make the triggering of the international anticipatory action response more effective, efficient and equitable, and connected to the local anticipatory response mechanisms.

Support the nascent Somali Federal and state governments' systems to use forecasts and projections to trigger anticipatory actions, with an eye to recommending how the international aid system can provide capacity strengthening and technical assistance to the development of the system.

Both countries

Study how the social exclusion, social capital and gender issues can be better represented in anticipatory action triggering systems.

Explore how national/international triggering of AA can facilitate local triggering of AA. For example, how can a national AA trigger facilitate local partners to make decisions about when, where and what actions to trigger and how can local expertise be harnessed to help national and international decision makers make decisions about triggering AA at a national scale?

6.3 Strengthen early warning and prediction analysis

Simplify and standardise the formal national- and international-level triggers for anticipatory action and their communication to decision makers to allow earlier “no regrets” decisions to be made. Clarify which national-level decisions are key for triggering early, for example, longer-term issues such as mechanisms to release funds, increasing advocacy, triggering preparedness for future actions and empowering contextual, flexible and adaptive sub-national and local decision making.

Produce more regular updates of food security and nutrition outcome projections through real-time monitoring and tools such as HEA to regularly adapt and adjust decision making about the food security and livelihoods dynamics and types of actions to be taken, especially at sub-national and local levels.

Better link informal and formal early warning systems to optimise the strengths of both systems. There is value and confidence across all stakeholders in both informal and formal systems of EW-EA. There have been some examples of

efforts to link them and build a harmonised AA system but there is a need to move this beyond isolated pilots.

- Strengthen anticipatory action triggers and thresholds at the lower end of tiered severity classification systems, such as IPC-compatible analysis and the NDMA EW-EA bulletin.
- Considerably strengthen the inclusion and participation of the informal system, both local and social networks, in processes in order to regularly update, adjust and adapt decision making about the timing, targeting and type of anticipatory actions and early actions to be taken.
- Strengthen the downwards communication from formal early warning systems to informal early warning systems to improve the timeliness, targeting and types of actions decisions used by the informal actors.



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- Atkinson, E. (2018). Social cost benefit analysis of the Early Action Fund. Save the Children UK. <https://resourcecentre.savethechildren.net/document/social-cost-benefit-analysis-early-action-fund/>
- Bulle, H.D. (2021). Interventions for mitigating drought-related livestock mortality in Africa's pastoral areas: A review of their relevance and effectiveness with special reference to Kenya. Proceedings of the XXIV International Grassland Congress / XI International Rangeland Congress, 25-29 October 2021. Nairobi: Kenya Agricultural and Livestock Research Organization. <https://uknowledge.uky.edu/igc/24/5/12>
- Coughlan de Perez, E., van Aalst, M., Chourlaton, R., van den Hurk, B., Mason, S., Nissan, H and Schwager, S. (2019). From rain to famine: assessing the utility of rainfall observations and seasonal forecasts to anticipate food insecurity in East Africa. *Food Security*, 11(1), 57–68. <https://doi.org/10.1007/s12571-018-00885-9>
- Duguma, M.K., Bruntrup, M and Tsegai, D. (2017). Policy options for improving drought resilience and its implication for food security: The cases of Ethiopia and Kenya. German Development Institute. https://www.die-gdi.de/uploads/media/Study_98.pdf
- Feeny, E. (2017). From early warning to early action in Somalia: What can we learn to support early action to mitigate humanitarian crises? [Oxfam Discussion Paper]. Oxfam. <https://doi.org/10.21201/2017.0834>.
- Gbetibouo, G., Obuya, G., Mills, A., Snyman, D., Huyser, O. and Hill, C. (2017). Kenya Country Report: Impact assessment on climate information services for community-based adaptation to climate change. Adaptation Learning Programme [ALP] for Africa, Care Climate Justice Centre. <https://bit.ly/3x1iw1C>
- Hermann, S.M. and Mohr, K.I. (2011). A continental-scale classification of rainfall seasonality regimes in Africa based on gridded precipitation and land surface temperature products. *Journal of Applied Meteorology and Climatology*, 50 (12), 2504–2513. <https://doi.org/10.1175/JAMC-D-11-024.1>
- Hillbruner, C. and Moloney, G. (2012). When early warning is not enough—Lessons learned from the 2011 Somalia famine. *Global Food Security*, 1(1), 20–28. <https://doi.org/10.1016/j.gfs.2012.08.001>
- Food and Agriculture Organization [FAO]. (2018). Impact of early warning early action: Protecting pastoralist livelihoods ahead of drought. FAO. <https://www.fao.org/emergencies/resources/documents/resources-detail/en/c/1144019/>
- Funk, C. (2021). Drought: What must happen next. The Citizen. <https://www.thecitizen.co.tz/tanzania/oped/drought-what-must-happen-next-3640330>
- Hillier, D. and Dempsey, B. (2012). A dangerous delay: The cost of late response to early warnings in the 2011 drought in East Africa. Save the Children and Oxfam. <http://hdl.handle.net/10546/203389>
- Intergovernmental Authority on Development [IGAD]. (n.d.) Promising resilience practices: early warning early action. IGAD. <https://bit.ly/3M4N5bd>
- IGAD Climate Prediction and Applications Centre [ICPAC]. Our seasonal forecasts. <https://www.icpac.net/seasonal-forecast>
- IGAD Climate Prediction and Applications Centre [ICPAC]. (2021). disaster early warning systems for early action: Will forecast based financing be the future of humanitarian response?. ICPAC. <https://www.icpac.net/events/disaster-early-warning-systems-for-early-action/>
- International Centre for Humanitarian Affairs [ICHA] and Kenya Red Cross. (2020). Integrating forecast-based action in an existing early warning system: Learning the context. ICHA and Kenya Red Cross. <https://www.forecast-based-financing.org/wp-content/uploads/2020/04/Integrating-Forecase-based-Action.pdf>
- International Centre for Humanitarian Affairs [ICHA] and Kenya Red Cross. (2019). Forecast-based financing implementation in Kenya: Opportunities and challenges. ICHA no 6/2019. <https://www.forecast-based-financing.org/wp-content/uploads/2020/04/Forecast-based-financing-publication-no.-6-2020.pdf>

- Kenya Red Cross. (2019). Case Study: Drought early warning early action: Using cash assistance. Kenya Red Cross.
https://www.anticipation-hub.org/Documents/Case_Studies/Case_study_-_Drought_Early_Warning_Early_Action_in_Kenya.pdf
- Konrad-Adenauer-Stiftung and University of Nairobi. (2016). Strengthening the concept of early warning for disaster risk reduction and food security: Practices and lessons from Baringo and West Pokot counties of Kenya. Konrad-Adenauer-Stiftung and University of Nairobi, African Drylands Institute for Sustainability.
<https://bit.ly/3x0TZtC>
- Maxwell, D., Lentz, E., Simmons, C. and Gottlieb, G. (2021). Early Warning and Early Action for Increased Resilience of Livelihoods in the IGAD Region. Feinstein International Center.
<https://fic.tufts.edu/publication-item/early-warning-and-early-action-for-increased-resilience-of-livelihoods-in-igad-region/>
- Monitoring and forecasting. (n.d.). University of California, Santa Barbara (UCSB).
<https://www.chc.ucsb.edu/monitoring>
- Mutua, D. (2020). How Kenya is Spotting and Stopping Drought Early in Remote Areas. Feed the Future.
<https://www.feedthefuture.gov/article/how-kenya-is-spotting-and-stopping-drought-in-remote-areas/>
- Mwangi, E. and Visman, E. (2020). Drought Risk Management: The towards forecast-based preparedness action approach [Technical paper]. Science for Humanitarian Emergencies and Resilience.
<https://bit.ly/3NFdayw>
- NOAA Climate Prediction Center. The North American Multi-Model Ensemble.
<https://www.cpc.ncep.noaa.gov/products/NMME>
- Obrecht, A. (2019). Adapting according to plan: Early action and adaptive drought response in Kenya. ALNAP Country Study. London: ODI/ALNAP.
https://www.alnap.org/system/files/content/resource/files/main/ALNAP_Adaptiveness_Kenya_Case_Study_DIGITAL.pdf
- Red Cross Red Crescent Climate Centre [RCRC]. (2020). Forecast based financing and early action for drought: Guidance notes for the Red Cross Red Crescent. RCRC.
<https://bit.ly/3m02EGL>
- Save the Children. (2019). Forecast-based action at Save the Children [Briefing note]. Save the Children.
https://resourcecentre.savethechildren.net/pdf/forecast-based_action_at_save_the_children.pdf/
- United Kingdom Research and Innovation [UKRI]. (2022). Towards forecast-based preparedness action (ForPAC): Probabilistic forecast information for defensible preparedness decision-making and action. UKRI.
<https://gtr.ukri.org/projects?ref=NE%2FP000673%2F1>
- University Corporation for Atmospheric Research (UCAR). Weather Research and Forecasting Model.
<https://www.mmm.ucar.edu/weather-research-and-forecasting-model>
- Vemuru, V., Stephens, M., Sarkar, A., Roberts, A and Baare, A. (2020). From isolation to integration: The borderlands of the Horn of Africa. World Bank, Washington, D.C.
<https://reliefweb.int/sites/reliefweb.int/files/resources/The-Borderlands-of-the-Horn-of-Africa.pdf>
- Way-Henthorne, J. (2022). Why tailored forecasts work so well for the eastern Horn of Africa March-to-May rainy season. Climate Hazards Center. <https://blog.chc.ucsb.edu/?p=1100>
- World Vision UK and International Research Institute for Climate and Society [IRI]. (2016). Learning from experience: a review of early warning systems: Moving towards early action 2016. World Vision UK and IRI.
https://www.wvi.org/sites/default/files/WV_EWEA_Doc_FINAL_Web.pdf

Terms of reference

Background

Conflict, climate change and COVID-19 are driving an unprecedented increase in the number of people who require humanitarian assistance. In 2021, one in 33 people worldwide were in need of humanitarian assistance and this figure looks set to increase in the coming year. Delayed action in response to early warning and predictive analysis leads to increased vulnerability and protection risks to children and increases the overall population in need of humanitarian assistance.

In 2011, there was an urgent call for radical change in the humanitarian system following the failure of the international community to respond in line with early warning information to prevent famine. Since 2011, there have been a number of promising developments in policy and practice in response to multi-country / multi-hazard risks including the Global El Nino crisis (2015-2016) and the Four Famines crisis (2017) including investment in forecasting linked to national early warning systems to new financing modalities to facilitate anticipatory action including pooled funds, crisis modifiers and unrestricted financing.

There is now a growing body of evidence and programmatic learning which underlines both the necessity and feasibility of shifting the system to intensify preparedness and mitigation efforts in anticipation of a crisis. Since 2016, the humanitarian system has been undergoing a major period of structural reform to improve the effectiveness and accountability to affected populations with renewed focus on quality financing; accountability to affected populations and local and national leadership.

Yet, in response to the unprecedented number of people experiencing IPC3-4 conditions and several countries likely to experience famine-like conditions; the international community has failed

to anticipate the impact of COVID-19 on pre-existing vulnerability of communities in conflict and fragile-affected states and funding / response to populations in IPC 2 and 3 conditions has not been forthcoming. The impact of delayed response to predicted crises and likely scenarios further increases children's vulnerability to protection, health and nutrition and risks. Women and girls are disproportionately affected.

Anticipatory action is essential to both prepare for the increased risk of climate change and conflict-related crises and ensure that – in the context of a global financial crisis – that funding is reaching those most in need at the right time. Investment in national preparedness and response capacity – including local civil society – and engagement with communities to understand and support coping strategies is essential in countries with increased exposure to risk and hazard and prevent collapse of the “system” capacity to respond and reduce need.

In January 2012, Save the Children and Oxfam released "A Dangerous Delay: The Cost of Late Response to Early Warnings in the 2011 Drought in the Horn of Africa" report looking at the cost of late response to early warnings in the 2011 drought in the Horn of Africa. The report listed recommendations for anticipatory action and humanitarian system-wide reforms. Ten years after, despite knowing how to identify early signs of stress and prevent extreme hunger, a combination of already rising global hunger levels, increased conflict, and the impact of both the climate crisis and COVID -19 has already led more than 41 million people to face emergency level of food insecurity.

¹ See Maxwell et. al, 2021:

<https://fic.tufts.edu/publication-item/early-warning-and-early-action-for-increased-resilience-of-livelihoods-in-igad-region/>

Purpose and Overview of Research

Anticipatory Action is receiving more attention than ever before in the global policy arena with new pledges for forecast-based financing emerging. Advancements in early warning systems and use of new technologies are also progressing and recent reviews¹ have outlined the key issues that require progress across many contexts. There is also a slow increase in the number of individual pilots being tests. However, we still lack detailed understanding of the “system” for forecast back action, or lack thereof, at a localised level to help us close the gap between global policy level debates and commitments, and the lived reality for affected communities.

The purpose of this research is to contribute to an enhanced understanding of what is needed at a National or sub-national level to ensure early action. The research will focus on affected areas of Kenya and Somalia that were the focus of the first Dangerous Delays report and due to concerning weather alerts for the coming months and projections of drought induced food insecurity.

The aim of the research is to generate a detailed understanding of blockers and enablers of early action to slow onset crises at a localised level through real-time and historic tracking of data sharing, decision making, and action to provide:

- A timeline of the release of information, and the decisions and actions of different actors in each context
- A mapping of the role of different actors and any coordination mechanisms in place to support forecast-based action in each context

These should draw out the factors that:

- Prevent different actors from acting early based on forecasts (e.g. perceptions around lack of data, accuracy, lack of agreed triggers, lack of clear mandate, lack of technical capacity, lack of contingency planning, lack of forecast based financing, access to conflict affected areas political will and other political factors)

- The factors that enable early action (e.g. clear mandate, finance in place, contingency planning in place, coordination mechanisms, data sharing, political will)

Key informants in Kenya and Somalia would be interviewed at regular (to be agreed) intervals over time and would include representatives of relevant government departments, UN agencies, local and international NGOs.

The research will provide an important contribution to two collaborative efforts:

- Analysis will be used as part of new policy document(s) which will follow up on the actions and recommendations made under the ground-breaking Dangerous Delays report published by Save the Children and Oxfam almost 10 years ago, to be published in 2022
- To inform the work and focus of the newly launched Jameel Observatory for Food Crisis Early Action in East and Southern Africa, which seeks to support locally identified evidence and data gaps to enabling early action through collaboration across researchers, data scientists, practitioners, and local communities.

Methodology

Learning Question	Exploration	Methods/Tools	Questions
<p>1. How did early FbA system produce and respond to early warning?</p> <p>1. Early warning information (data and analysis)</p> <p>2. Appropriate Action</p> <p>3. Governance</p> <p>4. finance</p> <p>5. Supplies management</p> <p>6. Communication and advocacy (for right action at the right time)</p>	<p>1.1 Early warning information</p> <p>EW Types, sources and uses What are the signals/triggers used for FbA and AA Challenges, barriers and bottlenecks to use of EW and signals/triggers for AA</p>	<p>KIIs, Desk Review, Timelines</p>	<p>1.1a When and how was early warning given (who and through what channels)? What type of early warning (e.g. weather forecast or food security outcome, livelihoods (e.g. livestock conditions) OR others....) Was it clear and unambiguous? What was good and what could have been done differently? How was it used (or not) to trigger action? How could it have been used better?</p> <p>1.1b What other information (assessments/analysis) were available? How were they used or not to trigger action? How could they be used better?</p> <p>1.1c What other indicators were you monitoring? [probe for HEA with SCF staff], how did you use the information alongside other early warning channels (probe for conflicting messaging/ how to manage data coming from different sources that are saying different things)</p> <p>1.1d Did you have predefined thresholds to trigger an EW message or EA, if yes what were the thresholds? if not why? If yes, did the triggers actually trigger action (FbA or otherwise)</p> <p>1.1e Did the EW identify 'hotspots' of drought emerging in specific areas (e.g. sub-county or district) or LHZ?</p>
	<p>1.2 Appropriate Action</p> <p>What action was taken and by who? If action was taken how did actors decide what action to take and when? Was the action anticipatory or a response? Challenges, barriers, bottlenecks in doing the right anticipatory actions at the right time?</p>	<p>KIIs (Round 1 and Round 2) Desk review. Timeline</p>	<p>1.2a What actions have been taken to relieve the effects of the drought. Where and why?</p> <p>1.2b Was this the right action at the right time? If not, why not? If yes, why?</p> <p>1.2c How did you decide on the right time? 1.2d How did you decide on the right action?</p> <p>1.2e What were the good practices and what would you have done differently?</p> <p>1.2f How did the rate of increase in meetings, coordination etc relate to the EW and EA?</p>

Learning Question	Exploration	Methods/Tools	Questions
	<p>1.3 Governance Who are the key stakeholders (in Gov, UN, Donors, NGOs, other Civil Society) Kenya- CG, Somalia - Federal States? How is AA institutionalized ? What is the structure of the AA system? (coordination, triggers, information systems, decision making, financing) Challenges, barriers, bottlenecks in building AA governance systems.</p>	<p>KIIs, Desk Review, Timelines</p>	<p>1.3a Who are the main stakeholders in early warning? and in early action? 1.3b Do you have a system for anticipatory or early action in your organisation? How does it work? 1.3b What are the triggers/thresholds used for each phase of the system? 1.3c What are the issues in using early warning forecasts/projections for triggering early action? 1.3d What were the main barriers or bottlenecks to taking action earlier (based on forecasts)? 1.3e If early action was taken, what factors made this possible</p>
	<p>1.4 Supplies Management/Supply Chains How are AA supplies and stocks organised? How are the stocks financed and managed? Challenges, barriers and bottlenecks to establishing AA supply management and supply chains?</p>	<p>KIIs, Desk Review, Timelines</p>	<p>1.4a When were supplies (cash, food, others) purchased and mobilised? Were pre-positioned stocks available? 1.4b How was this financed? 1.4c What were the challenges in getting supplies to households in need? 1.4d (if appropriate) Why were supplies mobilised before an emergency was declared?</p>
	<p>1.5 Communication & Advocacy How was forecast/projection communicated? How did communication of the EW influence decisions to take appropriate action? Challenges, barriers, bottlenecks in advocating for AA.</p>	<p>Timelines, KIIs, Desk Review</p>	<p>1.5a When were forecasts communicated (regular and/or extra) 1.5b (retrospective) were these accurate? How did the accuracy affect confidence in the communication? 1.5c Were there any stand-out champions for early action 1.5d How did language change over time to convey an increased sense of urgency (heat map or similar)</p>
	<p>1.6 Finance How is AA financing organised? (Governance, triggers, flexibility, timing) What worked and what didn't for financing of AA? What can be done to improve the system?</p>	<p>Desk Review, KIIs (round 1 & 2)</p>	<p>1.6a What pre-arranged funding tools are available (DRF, Crisis modifier, contingency funds, CERF AA etc). 1.6b Since September 2020 which ones did you use, when and for what? 1.6c What were the triggers you used to start using this funding? 1.6d What were the barriers to getting the funding and what was the effects of these barriers (e.g. late funding, different actions than desired)</p>

Learning Question	Exploration	Methods/Tools	Questions
<p>2. What factors have strengthened FbA in the last 10 years? (extent to which Dangerous Delays recommendations have been taken up)</p>	<p>2.1. No regrets programming/action Evidence that actions taken without waiting to see if EW were correct</p>	<p>Desk Review, KIIs, (round1)</p>	<p>2.1a Are there examples of funds mobilised and action taken in response to alerts before hard evidence of a FS crisis was available over the last 10 years? How did these work and who took the lead? What the challenges and how were they overcome? What made this possible? 2.1b What sort of analysis goes into selecting actions and how does uncertainty impact the selection of actions to be implemented? 2.1c Have Save and others reviewed their approach to drought risk? What tools do they use to ensure that certainty is not necessary? 2.1d How has experience informed understanding of the timing for early action? What is early enough?</p>
	<p>2.2. Systems developed and harmonised to have a common approach to triggers and early action across agencies and sectors Evidence of coordinated approach (eg OCHA AA in Somalia) Evidence of siloed, agency specific approaches and contradictory triggers/ thresholds How does devolved government affect harmonisation of triggers and EA across sectors?</p>	<p>Desk Review, KIIs, (round1)</p>	<p>2.2a How has science and learning informed decisions on what triggers to use for EA? 2.2b How are decision makers held accountable for their decisions? 2.2c Are indicators and thresholds to trigger action the same across different actors? is there any movement towards harmonizing the decision making process (i.e. when faced with uncertainty we came to the conclusion for EA using these steps)? 2.2d What factors influence triggering? How has this changed over the last 10 years?</p>
	<p>2.3. Political leadership for drought response (especially in devolved government in Kenya + New Government structure in Somalia)</p>	<p>Desk Review, KIIs, (round1)</p>	<p>2.3a What changes have governments made to institutionalise risk deduction and disaster response? How successful has this been? 2.3b What examples are there of political leadership in mobilising early action and/or drought response. Has this been influenced by devolved government?</p>
	<p>2.4. Preventative humanitarian work ('no regrets', resilience strengthening)</p>	<p>KIIs (round 1) desk study</p>	<p>2.4a How has programming in drought areas changed in the last 10 years? Is it more 'risk informed'? What are the risk reduction strategies in Save and key other organizations? 2.4b How is preventative humanitarian aid being done? 2.4c Has the focus on resilience programmes also strengthened preparedness and risk reduction? 2.4d Is there evidence of longer term programmes adapting to respond to emerging crisis?</p>

Learning Question	Exploration	Methods/Tools	Questions
	2.5. Integrating risk management into systems (people and organisational structures) contingency planning preparedness	Desk Review, KIIs (round 1)	<p>2.5a Has the organisational structures of donors, UN and NGOs changed to accommodate a more risk orientated and adaptable system?</p> <p>2.5b Is there any evidence of risk management cutting across development and humanitarian silos?</p> <p>2.5c How have standard risk reduction tools like contingency planning and preparedness changed to reflect learning from 2011?</p> <p>2.5d Are there any examples of smaller step by step actions that promote mitigating impacts of the on-going shock (2nd failed rains) while building resilience to potential shocks (a 3rd failed rains)</p>
	2.6 Shock responsive/ flexible finance (explore how financing has changed since 2011)	Desk study KII	<p>2.6a What examples of flexible financing systems are there? Did these develop in response to the lessons of 2011?</p> <p>2.6b Which funding mechanisms have not adapted, are still too rigid for EA and why? 2.6c Are NGOs structured to take advantage of any available flexible funds?</p> <p>2.6d What international contingency funding (including insurance) is being used in Kenya and Somalia. How has this developed since 2011?</p>
3. What was the timeline of forecast, early warning and early action?	3.1 Climate & Ew analysis timeline. Climatic timeline and analysis Food security and other drivers timeline and analysis Alignment of climate and food security + on timing, hot spots, severity	KII,s, secondary data review and analysis plotting timelines key indicators	<p>3.1a How has drought progressed and where?</p> <p>3.1b Where are the hotspots and are they consistent over 4 seasons?</p> <p>3.1c Do hotspots at start of each season align with projected stress from previous season?</p> <p>3.1d How do food insecurity, malnutrition and other outcomes (water, disease outbreaks) align with drought severity</p> <p>3.1e Is there evidence that compounding shocks (locusts, Covid etc) affected the food security and other outcomes?</p>
	3.2 Funding and response Timeline Timing of UN appeals & response, government action (Nat and county), Donor fund release, Types of funding (AA, Resilience, Humanitarian regular response, emergency response,) Timing and type of action taken (Timing against EW timeline and types categorised by AA, Resilience, early action, regular hum response, emergency response)		<p>3.2a What is the time lag between early warning, appeals and start of action?</p> <p>3.2b Can drought response be distinguished from ongoing resilience /humanitarian programming in Somalia? Any evidence of 'surge' or activation of contingencies ahead of drought specific emergency funding?</p> <p>3.2c Which actors are fastest to act? Which are the slowest? Why do you think so (evidence/ examples)</p>

Learning Question	Exploration	Methods/Tools	Questions
	<p>3.3. Media, Alerts & declarations Timeline Timing of media, Government UN and donor communications against EW timeline. How was urgency communicated? Any evidence of synchronization between action/funding following a major communication (media/EW sources/other) Evidence of politicisation of timing of declarations</p>		<p>3.3a Did timing of other disasters (Covid, conflict, elections) obscure the emerging drought (push it off the headlines)? if yes, how? If not, why do you think so? 3.3b What role have local leaders played in communicating the severity and advocating for action? 3.3c How appropriate is language used in EW and forecasts to the urgency of the situation at any one time. How did this change over time? 3.3d Which types and sources of communication seem to trigger action most effectively? why do you think this?</p>

List of respondents

Name	Organization	Position	Country focus
Ahmed Abdi Ibrahim	Arid Lands Development Focus (ALDEF) and ASAL humanitarian network (AHN)	Chief Executive Officer ALDEF and Coordinator AHN	Kenya
Evans Mukolwe	Consultant who reviewed Drought Early Warning System (DEWS) on behalf of NDMA	Consultant	Kenya
Sabtow,	Department of Agriculture, Wajir County	Director	Kenya
Abdulkadir Hussein Alasow	Disaster Management and Humanitarian Coordination, Department of Special Programmes, Wajir County	Director	Kenya
Guleid Artan	IGAD climate prediction and applications Centre (ICPAC)	Director	Kenya
Chris Kiptum Ngetich	Kenya Meteorological Department	Forecaster, Long Range forecasting Division	Kenya
Jemimah Maina	Kenya Red Cross and International Centre for Humanitarian Affairs (ICHA)	Climate research officer/ICHA lead	Kenya
Safia Verjee	Kenya Red Cross and International Centre for Humanitarian Affairs (ICHA)	Innovation lead	Kenya
Thomas Kang'ethe	Ministry of Water	Principal Water Researcher	Kenya
Roman Sherah	National Drought Management Authority (NDMA) based in Kwale)	Drought Management Officer	Kenya
Hassan Kalmooy	National Drought Management Authority (NDMA) based in Wajir)	Drought Management Officer	Kenya
Nuria Ibrahim Abdi	Nutrition Coordinator, Wajir County		Kenya
Matthew Cousins	Oxfam	Director Humanitarian Systems Strengthening	Kenya
Mohamoud I. Duale	Rural Agency for Community Development and Assistance (RACIDA)	Chief Executive Officer	Kenya
Fred Ogeto	Rural Agency for Community Development and Assistance (RACIDA)	Kenya programme coordinator	Kenya
Rowan Haritty	Rural Agency for Community Development and Assistance (RACIDA)	Programme Development Officer	Kenya
Enoch Nyakundi	Save the Children	Child Poverty Technical Specialist	Kenya
Samuel Wandera	Save the Children	Regional Analyst	Kenya
Thomas Lay and Yvonne Sarchi	Save the Children	Regional Head of Emergency	Kenya
Yvonne Sarchi	Save the Children	Regional humanitarian Operations Coordinator	Kenya
Stephen Mutiso	Save the Children	Head of Food security and livelihoods	Kenya
Dominic Stolarow	UNICEF	Chief Field Operation and emergency	Kenya
Jacob Kipkeny	UNICEF	WASH Specialist, UNICEF Kenya Country Office-Garissa Zonal Office	Kenya
Christopher Oludhe Kenya	University of Nairobi	Senior Lecturer, College of Physical and Biological Sciences, Department of Meteorology	Kenya
Don Owino	USAID	BHA Food Security Specialist	Kenya

Name	Organization	Position	Country focus
Maurine Ambani	World Food Programme	FbF Regional Coordinator	Kenya
Felix Okech	World Food Programme	Head of Refugee and Relief Operations	
Allan Kute	World Food Programme	Programme Policy Officer	Kenya
Evans Osumba	World Vision	Area Program Manager, Wajir and Mandera	Kenya
Abdi Ali Bayle	Baxnaano team (National Safety Net Program), Jubbaland	Liaison Officer	Somalia
Abdullahi Mohamoud	Baxnaano team (National Safety Net Program), Puntland	Liaison Officer	Somalia
Mohamed Bishar	BRCIS Consortium - Building Resilient Communities in Somalia	Field Coordinator-Field Security and Livelihood	Somalia
Mohamed Hamid	Community member, Hoodaa (under Caluula) - Bari	Community Member	Somalia
Hared Ateye	Community member, Waaciye - Bari	Community Member	Somalia
Madobe Shide Ali	Community member, Warayle (under Dollow)-Gedo	Community Member (Village Elder, Warayle EWC Focal Person)	Somalia
Abdirahman Mohamed Abd	Danish Refugee Council (DRC), Jubbaland Gedo	Focal Person	Somalia
Abdullahi Abdifatah Hassan and Nadiif Ahmed (Guddiga Gurmada Abaaraha Gobolka)	GEDO Drought Relief Committee	Community representatives	Somalia
Abdirizak Ahmed	Humanitarian and Disaster Management Agency, Bari, Puntland	DRR Lead	Somalia
Abdirashid Adan	Islamic Relief Worldwide, Puntland	Bari and Sanaag Focal Person	Somalia
Mohamoud Ismail Isse	Local Government (Iskushuban)- Bari	District Council	Somalia
Hassan Baari / Abdulkadir Omar Hersi	Ministry of Humanitarian and Disaster Management (MOHDM) Federal	Head of Multihazard national early warning centre/ head of DRR section	Somalia
Ahmed Hassan Mohamed	Ministry of Water and Energy Resource/ Drought and Flood Task force lead, Federal	Hydromet Director	Somalia
Kassim Mohamed Adan	Norwegian Refugee Council (Southwest)	NRC Staff	Somalia
Mohamoud Muhamed Burale	OCHA, Jubbaland-Gedo	Focal Person	Somalia
Fu'ad Aflow	Puntland Community Drought Committee	Community Organizer	Somalia
Mohamed Beegsi	Save the Children	FSL Technical Specialist	Somalia
Hussein Ibrahim, Hassan,	Save the Children	FSL technical Specialist	Somalia
Farah Mohamed, Adan	Save the Children	Humanitarian Manager	Somalia
Isaq Dahir	Save the Children	Social Protection Technical Specialist	Somalia
Ahmed Qays	Save the Children	Head of SCI South-central office	Somalia
Abdullahi Mohamud Haji	Save the Children	DPM at SCI Bari Office	Somalia
Boiketho Murima	UNICEF	Emergency Manager	Somalia
Rachael Wamoto	UNICEF	Programme Officer	Somalia
Hiwot Kiflom	UNICEF	Emergency Specialist	Somalia
Bashir Mo'allim Adan	World Food Programme, Gedo	Program Assistant	Somalia

Interview guide

Background

Learning Question 1: How did early Forecast-based action (FbA) system produce and respond to early warning?

1.1 Early warning information

1.1 (a) When and how was early warning given (who and through what channels)?

- What type of early warning (e.g. weather forecast or food security outcome, livelihoods (e.g. livestock conditions) OR others....)
- Was it clear and unambiguous? What was good and what could have been done differently?
- Was it used to trigger action?
- How could it have been used better?

1.1 (b) What other information (assessments/analysis) were available?

- How were they used or not to trigger action?
- How could they be used better?

1.1 (c) What other indicators were you monitoring? [probe for HEA with SCF staff]

- how did you use the information alongside other early warning channels (from 1.1a) (probe for conflicting messaging/ how to manage data coming from different sources that are saying different things)

1.1 (d) Did you have predefined thresholds to trigger an EW message or EA,

- if yes what were the thresholds? did the triggers actually trigger action (FBA or otherwise)
- If not, why?

1.1 (e) Did the EW identify 'hotspots' of drought emerging in specific areas (e.g. sub-county or district) or LHZ?

1.2 Appropriate Action

1.2 (a) What actions have been taken to relieve the effects of the drought. Where and why?

1.2 (b) Was this the right action at the right time? If not, why not? If yes, why?

1.2 (c) How did you decide on the right time?

1.2 (d) How did you decide on the right action?

1.2 (e) What were the good practices and what would you have done differently?

¹ See Maxwell et. al, 2021:

<https://fic.tufts.edu/publication-item/early-warning-and-early-action-for-increased-resilience-of-livelihoods-in-igad-region/>

1.3 Governance

- 1.3 (a) Who are the main stakeholders in early warning? and in early action?
- 1.3 (b) Do you have a system for anticipatory or early action in your organisation? How does it work?
- 1.3 (c) What are the triggers/thresholds used for each phase of the system?
- 1.3 (d) What are the issues in using early warning forecasts/projections for triggering early action?
- 1.3 (e) What were the main barriers or bottlenecks to taking action earlier (based on forecasts)?

1.4 Supplies Management/Supply Chains

- 1.4 (a) When were supplies (cash, food, others) and in kind items purchased and mobilised?
Were pre-positioned stocks available?
- 1.4 (b) How was this financed?
- 1.4 (c) What were the challenges in getting supplies to households in need?
- 1.4 (d) (if appropriate) Why were supplies mobilised before an emergency was declared?

1.5 Communication and advocacy

- 1.5 (a) When were forecasts communicated (regular and/or extra)
- 1.5 (b) (retrospective) were these accurate? How did the accuracy affect confidence in the communication?
- 1.5 (c) Were there any stand-out champions for early action
- 1.5 (d) How did language change over time to convey an increased sense of urgency (heat map or similar)

1.6 Finance

- 1.6 (a) What pre-arranged funding tools are available (DRF, Crisis modifier, contingency funds, CERF AA etc.).
What government financing is available?
- 1.6 (b) Since September 2020 which ones did you use, when and for what?
- 1.6 (c) What were the triggers you used to start using this funding?
- 1.6 (d) What were the barriers to getting the funding and what was the effects of these barriers (e.g. late funding, different actions than desired)

Learning Question 2. What factors have strengthened FbA in the last 10 years? (extent that Dangerous Delay report recommendations have been taken up)

2.1. Early programming/action

2.1 (a) Are there examples of funds mobilised and action taken in response to alerts before hard evidence of a FS crisis was available over the last 10 years?

- How did these work and who took the lead?
- What the challenges and how were they overcome? What made this possible?
- What sort of analysis goes into selecting actions and how does uncertainty impact the selection of actions to be implemented?

2.2. Systems developed and harmonized to have a common approach to triggers and early action across agencies and sectors

2.2 (a) How has science and learning informed decisions on what triggers to use for EA?

2.2 (b) How are decision makers held accountable for their decisions?

2.2 (c) Are indicators and thresholds to trigger action the same across different actors? Is there any movement towards harmonizing the decision making process (i.e. when faced with uncertainty we came to the conclusion for EA using these steps)?

2.2 (d) What factors influence triggering? How has this changed over the last 10 years?

2.3. Political leadership for drought response (especially in devolved government in Kenya + New Government structure in Somalia)

2.3 (a) What changes have governments made to institutionalize risk deduction and disaster response? How successful has this been?

2.3 (b) What examples are there of political leadership in mobilizing early action and/or drought response. Has this been influenced by devolved government?

2.4. Preventative humanitarian work ('no regrets', resilience strengthening)

2.4 (a) How has programming in drought areas changed in the last 10 years? Is it more 'risk informed'? What are the risk reduction strategies in Save and other key organizations?

2.4 (b) How is preventative humanitarian aid being done? 2.4 (c) Has the focus on resilience programmes also strengthened preparedness and risk reduction? 2.4 (d) Is there evidence of longer term programmes adapting to respond to emerging crisis?

2.5. Integrating risk management into systems (people and organizational structures) contingency planning preparedness

- 2.5 (a) Has the organizational structures of donors, UN and NGOs changed to accommodate a more risk orientated and adaptable system?
- 2.5 (b) Is there any evidence of risk management cutting across development and humanitarian silos?
- 2.5 (c) How have standard risk reduction tools like contingency planning and preparedness changed to reflect learning from 2011? 2.5 (d) Are there any examples of smaller step by step actions that promote mitigating impacts of the on-going shock (2nd failed rains) while building resilience to potential shocks (a 3rd failed rains)

2.6 Shock responsive/flexible finance (explore how financing has changed since 2011)

- 2.6 (a) What examples of flexible financing systems are there? Did these develop in response to the lessons of 2011? Is government financing available?
- 2.6 (b) Which funding mechanisms have not adapted, are still too rigid for EA and why?
- 2.6 (c) Are NGOs structured to take advantage of any available flexible funds?
- 2.6 (d) What international contingency funding (including insurance) is being used in Kenya and Somalia? How has this developed since 2011?