



REPORT

CO-CREATION OF A RESEARCH AGENDA FOR LOCALIZED ANTICIPATORY ACTION IN SOMALIA

Photo: A Somali couple showcasing their crop harvest. Photographer name: Mustafa, Abdillahi, Save the Children
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Executive Summary

Overview

Somalia has faced over 30 climate events—including severe droughts and floods—over the past two decades and climate change is predicted to increase their frequency and severity. At the same time, the gap between humanitarian appeals and receipts has been growing. In such an environment, there is a critical need for developing effective, proactive measures to mitigate the impacts of climate shocks on vulnerable populations, particularly pastoral communities that are central to Somalia's economy and culture.

While advances in early warning technologies enable timely and accurate weather forecasts that could enable stakeholders to act before disasters strike, thereby avoiding many of the costs associated with disaster response and reducing the human suffering that disasters cause, there are numerous challenges that have limited their up take in Somalia. Even when climate shock forecasts are taken up, preparedness responses, both by community members and those that support them, are often limited. The result is that much of the potential value of early warning systems (and the anticipatory actions that they could trigger) has gone unrealized.

The Reducing Impacts of Disasters Using the Anticipatory Action Framework in Somalia project aims to increase preparedness activities and improve the effectiveness of anticipatory action. As a first step, the project held a series of six workshops with government workers, INGOs and pastoralists across Somalia to learn about their use of early warning and anticipatory action and challenges to greater use. The first half of each workshop focused on mapping current early warning processes and preparedness activities across all sectors. The second half worked to identify and prioritize challenges for more effective preparedness. We then developed a set of research agendas that aim to address those challenges prioritized in the workshops. This report provides a brief description of the challenges prioritized during the workshops and the proposed research agendas.

Workshop findings: Priorities to more effective early warning and early action in Somalia

While there was considerable diversity in the experiences of the participants across sectors and geography, several priorities were shared by most. The first is that early warning systems currently do not meet the needs of its clients, whether they be government workers, NGO field staff, or pastoralists. There are issues related to trust, content, lead time, access and language that are barriers to use. There was a considerable emphasis placed on the need for EWS to be co-developed with its users and for tailored approaches to information sharing, based on sector, capacity, and livelihood. On top of these challenges, there is fragmentation in the EWS space that leads to confusion and contradictions, undermining the system as a whole.

The second main challenge was on ensuring that when shocks are forecasted, effective action is taken. There are many barriers to those actions. For pastoralists, there may be cultural reasons not to act or resource constraints limit opportunities. For organizations and community-level groups, resource constraints can also limit actions but so can a lack of action plan or poor coordination. Across all sectors, there is a need to grow capacity of individuals to make informed decisions based on available forecast information and in understanding the value of preparedness.

Across both challenge areas, there was an emphasis on (1) the need for activities and structures to support existing local EWS and preparedness measures and (2) to ensure that information and actions supported individuals of all ages, livelihoods, abilities, and socio-economic class. The place of children, both in their vulnerability and their potential as change

agents, was also a frequent topic of discussion.

Proposed Research Agendas

Drawing on the literature and the priorities identified during the workshop, the following research agendas have been developed.

Early warning for community action: This research agenda asks how the co-development of early warning systems that value both external and internal knowledge and systems can be used to improve the value of early warning for communities. We propose an agenda that starts with the existing community systems and then seeks to strengthen them, rather than developing a parallel system. Our research will ask community members: What additional information do you need? When do you need it? And how would you like to receive it? This work will pay special attention to diversity in needs across the spectrum of access, age and income. Our research questions are then aimed at testing various approaches and strategies to identify which are most effective at meeting those needs.

Changing attitudes of community members towards EW and AA: This agenda aims to increase the use of effective preparedness measures. This work first requires that community members have access to accurate and appropriate forecasts (agenda 1) and then works to building capacity related to how forecasts are made and how to interpret and assess them. Once the community has access to and understanding of an early warning system that has been tailored to their needs, we can then focus on understanding social norms and individual perceptions that contribute to or undermine take up of early warning messaging and preparedness activities. We anticipate that schools will act as an important channel for training adults and children on early warning and preparedness so that they can become agents

of change. The research agenda asks questions related to effective capacity development, social norms and behavioural change.

Increasing private sector and diaspora AA investments: The private sector and diaspora already plays an important role in disaster response, and does so by mobilizing resources and providing direct support in ways that are very different from those available to humanitarian actors and governments. Here we ask, how to most effectively extend that support to include anticipatory actions? A second component of this agenda examines how the the private sector support can support anticipatory action through investments in profitable business that mitigate the impacts of shocks, such as insurance, or that improve public services, such as providing a channel for early warning services or cash transfers

(e.g., mobile wallets). There is a need to better understand existing engagements and appetite for investments in preparedness as well as the development of strategies for increasing it.

Conclusion

This initiative highlights the need for integrated disaster preparedness strategies that align with local realities and leverage both modern and traditional forecasting methods and preparedness. By fostering collaboration among stakeholders, strengthening local capacities, and implementing a systematic approach to anticipatory action, the research proposed here can help develop strategies that mitigate climate-related disaster impacts and enhance community resilience.

Introduction

Background

Early Warning and Anticipatory Action (AA)

As weather-related catastrophes increase in frequency and severity, so have the gaps between humanitarian appeals and receipts (Development Initiative, 2024). This gap, already anticipated to widen in the coming years, is likely to increase dramatically due to shifting priorities by the US and other donor countries (Pearson, 2025). In this context of heightened need without a parallel growth in resources, organizations are seeking more cost-effective strategies to reduce human suffering. Advancements in early warning technologies have improved the timeliness and accuracy of weather forecasts, raising hopes in donor and humanitarian sectors that early warnings of impending weather shocks could help mitigate suffering through various mechanisms. The term “anticipatory action” is typically used to describe such proactive measures taken by organizations in response to a forecasted shock in order to reduce its impact.

Providing early warnings directly to communities is one such action. Ideally, individuals, communities, and local governments can use these warnings to prepare for upcoming shocks and avert humanitarian crises. While early warning messaging has proven effective in several contexts (for several examples, see the 2024 review by Ringo, Sabai and Mahenge), challenges remain. Chief among them is that individuals and communities may not understand or trust the early warnings, the content of the early warning may not be relevant for local decision-making, or they may lack the resources to take meaningful risk-mitigation and preparedness actions (e.g., Levine et al., 2021; Paton, 2008; Ringo, Sabai & Mahenge, 2024).

A second type of anticipatory action involves organizations taking steps themselves in preparation for the coming shock to ensure response in a more timely manner. For example, organizations can respond to forecasted shocks by prepositioning food aid and reallocating human resources to where they will be most needed. Such preparation allows for more timely and cost-effective post-disaster response. Several studies have shown that organizations that prepare for forecasted shocks—such as prepositioning supplies, developing contingency plans, and providing training—are more



effective when shocks arrive, implementing responses more cost-effectively and/or more quickly (e.g., IFRC, 2009).

Finally, forecasts can be used to trigger direct actions by agencies to support community preparedness. Such actions generally aim to reduce the damage that the impending shocks will have on communities by addressing resource, information, and/or coordination constraints. While there have been several research projects that have used simulations to project that AA could produce large cost savings (e.g., Venton, 2018; Venton et al., 2012; Hill, Skoufias & Maher, 2019), real-world evidence that AA is a cost-effective strategy is limited and highly context-dependent (Weingärtner & Wilkinson, 2019). For example, there is strong evidence that anticipatory action can reduce the negative impact of shocks (e.g., FAO, 2019; Gros et al., 2022; Pople et al., 2019;

Swift & Schofield, 2024), but these studies cannot determine if the anticipatory actions were more cost-effective than post-disaster responses would have been. To the authors' knowledge, none of the studies in lower-income settings provide strong evidence that an implemented anticipatory action was more cost-effective than post-disaster response for households in the long run. Balana et al. (2023) are among the few studies that aim to answer this question, comparing the impacts of a cash transfer provided in response to a forecasted flood to those who received the same amount after the flood. They found some evidence that funds provided before the flood reduced use of negative coping strategies during the event and resulted in some changes in household production afterward, but there was no evidence across a wide variety of indicators that those receiving AA were better off after the flood.



Calls for Localizing Early Warning and Anticipatory Action

While the excitement around the potential of anticipatory action has continued to build, there has also been calls for caution and care from some settings, citing a lack of evidence and interventions that are not fit for purpose (e.g., Derbyshire et al., 2024; Levine et al., 2023). At the same time, here is a strong call from communities and implementing partners to tailor interventions to specific contexts and needs, and for interventions that prioritize strengthening existing (local) preparedness systems (Bleck et al., 2023; Derbyshire et al., 2024; Weingärtner et al., 2022). Early warning systems provide one striking example of this. There can be no doubt that forecast technologies are improving, but those improvements do not necessarily translate into more useful early warnings for producers. For early warnings generated by a computer model to be useful to producers, those systems need to consider existing early warning systems as well as be tailored to users' needs—in terms of language, timing, mode,

risk, presentation, education, medium (Grace, 2024).

The need to tailor responses to local contexts and involve local stakeholders in their development and implementation extends to the direct anticipatory actions that organizations are taking as well. For example, while individual cash transfers are often the default intervention for humanitarian organizations, this approach has been questioned because cash requires access to well-integrated markets to maintain value during shocks, the transfers are commonly insufficient for protracted crises such as drought, and alternative interventions that support existing preparedness structures could be more cost effective and avoid long-term erosion of these structures (Grace, 2024). The call for tailoring early warning and anticipatory action to local needs and using them to support existing systems has been growing louder with nearly every intervention (Farr et al., 2022; Levine et al., 2020).

Somali Context

Pastoral Populations in Somalia

Pastoralism plays a crucial role in Somalia's economy and culture. Approximately 65% of the Somali population depends on pastoralism as their primary livelihood (Knight-Jones et al., 2014). Livestock exports account for about 65% of the country's GDP and 80% of the country's foreign exchange earnings (FAO, 2017). In 2015, Somalia exported 4.9 million sheep and goats, 294,000 cattle, and 72,000 camels to Gulf States, generating \$380 million in revenue (FAO, 2017).

While pastoralism is the country's largest economic and livelihood sector, it faces many challenges. Political instability and weak governance structures in Somalia limit pastoralists' representation in decision-making, leaving their needs largely unaddressed (Pavanello, 2009; Somalia Country Report for Pastoralism, 2006). Economic constraints, including market fluctuations, export bans by Gulf member states, and inadequate infrastructure, hinder trade opportunities and weaken pastoral economies (Little, 2004; FAO, 2018). In addition, environmental changes, such as recurrent droughts, extreme heat, and land degradation, have reduced pasture availability and increased livestock mortality (Markova, 2018).

Climate, Shocks and Impact in Somalia

Somalia's climate varies from arid to semi-arid and tropical wet and dry, with northern parts experiencing cooler temperatures than the hotter central and southern regions, which average around 30°C (Thalheimer et al., 2020). The country has two main rainfall seasons: Gu (April to June) and Deyr (October to December), influenced by the Inter-Tropical

Convergence Zone (ITCZ) and monsoonal winds (Hussein et al., 2024). This climate makes Somalia highly vulnerable to climate-related shocks, with significant impacts on its environment, economy, and population (Boitt et al., 2018; Warsame et al., 2023). Climate change exacerbates these vulnerabilities, leading to more frequent and severe droughts and floods that significantly affect Somalia's agricultural and pastoral sectors (Boitt et al., 2018).

The country faces increasingly frequent and severe climate-related shocks due to global climate change (Abdiwali et al., 2024; Grene, 2020; Hussein et al., 2024). In the 23 years between 1990 and 2023 alone, Somalia reported over 30 climate events, including 12 droughts and 19 floods (Somalia Situation Report, 2023). Droughts known as "Sima," have been particularly devastating, with five consecutive failed rainy seasons from 2017 to 2019, leading to widespread displacement and significant livestock deaths (Heritage, 2017). A recent period of below-average rainfall has heightened concerns for another severe drought, as the upcoming Gu season in 2025 is forecasted to be below normal (FAO, 2025). This has increased water shortages and livestock stress, with projections for 2025 indicating a high likelihood of drought-induced displacement and food insecurity (FAO, 2025). Conversely, heavy rainfall can lead to devastating floods; in 2023, over 700,000 people were affected with more than 250,000 displaced in Belet Weyne alone (Somalia Situation Report, 2023).

These climate shocks threaten food security and ecosystems while compounding existing social and economic challenges, such as poverty and conflict, further straining Somalia's fragile governance structures and peacebuilding

efforts (Somalia Situation Report, 2023). Ongoing vulnerability to climate shocks underscores the need for robust resilience-building measures and sustainable development strategies to mitigate these effects and support the country's recovery and growth. Addressing these challenges will require both domestic efforts and international support to ensure Somalia can adapt to its changing climate and build a more resilient future (Hussein et al., 2024; Federal Government of Somalia, 2022).

Early Warning (EW) and Anticipatory Action (AA) in Somalia

Somalia's ongoing vulnerability to climate shocks highlights the urgent need for effective early warning systems and anticipatory action (Levine et al., 2021).

The early-warning, early-action (EWEA) mechanism was initiated in Somalia after the 2011 famine to improve response times and mitigate the impact of crises (UNDRR, 2024). This system includes an EWEA dashboard

and an accountability framework to ensure coordinated

action among humanitarian actors. Key initiatives in Somalia's EW and AA systems include efforts by the Food Security and Nutrition Analysis Unit (FSNAU) and the Building Resilient Communities in Somalia (BRCiS) consortium, which have developed EW systems that use indicators related to health, nutrition, climate patterns, market dynamics, and population movements to trigger timely interventions (Feeny, 2011). At the same time, the CIMA Research Foundation is working to enhance national meteorological and hydrological forecasting services for floods and droughts, creating an integrated web system for managing EW information (Feeny, 2011). Additionally, the SAADAAL Early Warning System, developed by Shaqodoon, uses advanced technologies like artificial intelligence (AI) to improve disaster preparedness and response, delivering critical insights and timely alerts to communities.

Gaps and Challenges on Implementing EW and AA in Pastoral Context

The implementation of Somalia's EW and AA systems face several challenges. Key obstacles include inadequate infrastructure, ongoing climate shocks and security concerns, all of which both increase the vulnerabilities of pastoral population and hinder EW/AA interventions (Feeny, 2011; Somalia Situation Report, 2023). Further, effective AA relies on strong coordination among humanitarian organizations and improved information sharing; however, Somalia's complex governance structures and ongoing conflicts make this difficult to achieve (Levine et al., 2022).

Community networks are crucial for dissemination of EW and successful AA interventions, but knowledge and skills gaps within communities reduce their capacity to effectively prepare for and respond to crises (Feeny, 2011). Additionally, the appropriate timing of AA varies across regions and livelihood strategies, making it difficult to design and deliver support effectively (Levine et al., 2022). Finally, securing sustained funding remains a challenge despite international funding.

Addressing these challenges requires improved coordination among stakeholders, policy reforms, increased financial support, and greater inclusion of pastoral voices in resilience-

building initiatives (Levine et al., 2022). There is a need for initiatives that enhance operational early warning systems and anticipatory action for drought risk in pastoralist livelihood systems across the Greater Horn of Africa (Derbyshire et al., 2024; Lubogo et al., 2022). Efforts in this space should focus on improving forecasting accuracy, predictive modelling, and developing robust anticipatory action plans, particularly in transboundary areas where pastoral communities are most vulnerable. The adoption of community-led early warning systems and participatory approaches can help align humanitarian responses with local realities, ensuring interventions are relevant and effective. Empowering local communities and integrating their knowledge into early warning and anticipatory action strategies can build more resilient systems that mitigate climate shocks in Somalia's pastoral regions. Targeted interventions should strengthen local capacities, enhance access to information, and promote community-based adaptation strategies.

Study Methods

To better understand the current state of early warning and anticipatory action in Somalia and to facilitate the co-development of a research agenda aimed at improving their impacts, we organized six workshops. The workshop locations and participants were selected carefully to ensure that we elicited a broad range of perspectives and insights from stakeholders and different levels and from across different areas of Somalia/Somaliland. This section outlines the methodologies used during the workshops to collaboratively develop a research agenda for enhancing localized anticipatory action in response to climate-related shocks in the region. The key components included the selection of locations, participants, a structured workshop agenda designed to elicit information on the challenges and investment priorities related to early warning and anticipatory action of communities vulnerable to climate change. We gathered data through structured discussions, which were analysed thematically to identify key themes from the qualitative data.

During the workshops, we identified research priorities through group discussions among diverse stakeholders, focusing on qualitative questions. Following presentations, participants synthesized inputs into a cohesive research agenda. Collaborative exercises were used to facilitate consensus on key priorities. To finalize the research agenda, we considered criteria such as relevance to current trends, feasibility based on available resources, potential community impact, and the inclusion of diverse perspectives. The workshop process, implementations, documentation and the prioritization of a research agendas were all done in close collaboration with Save the Children Somalia team.

Selection of Locations

Selecting target locations was a vital initial step to ensure the research agenda reflected diverse environmental, socio-economic, and political contexts. Locations were chosen based on alignment with existing projects, vulnerability to climate-related shocks, representation of various livelihood systems, and accessibility. Priority was given to areas with ongoing projects, specifically the GFFO SAADAAL project, to leverage existing community relationships and integrate the research agenda with resilience-building efforts. Locations were then selected to ensure variation in climate-related vulnerabilities and livelihoods in Somalia and Somaliland (Figure 1). For instance, Beledweyne, along the Shabelle River, was chosen for its high risk of recurrent flooding, while Burco in the Togdheer region was selected for recurring droughts affecting pastoralist communities. Coastal areas, like Bander Beyla in Puntland, were considered due to their vulnerability to cyclones, monsoon winds, and sea-level rise.

Logistical feasibility and security were also considered to ensure participant safety and accessibility. Mogadishu and Hargeisa served as secure and accessible locations for high-level stakeholders from Somalia and Somaliland, while Mogadishu was suitable for community representatives from Beledweyne. Garowe was central for state-level stakeholders in Puntland and community representatives from Bander Beyla, whereas Burco in Somaliland hosted community-level stakeholders.

Figure 1. Somali livelihood zones and workshop locations

Selection of Participants

Recognizing that effective anticipatory action requires broad stakeholder engagement. Special efforts were made by the workshop team to ensure diverse participation in the workshops. Participant selection was guided by multi-stakeholder representation, sectoral diversity, community-based knowledge, institutional expertise, and balanced perspectives. Participants were drawn from various stakeholder groups, including primary producers (farmers, pastoralists, fisherfolk), local civil society organizations, national and international NGOs, UN agencies (e.g., FAO, WFP, UNDP), government agencies (e.g., Ministries of Agriculture, Environment, and Humanitarian Affairs), research institutes, private sector actors (e.g., financial institutions), religious leaders, and representatives from vulnerable groups (women, youth).

Participants represented sectors relevant

to climate change adaptation and disaster risk reduction, including agriculture, water resources, environment, health, education, and infrastructure. Emphasis was placed on ensuring representation from both genders and including community members knowledgeable about local weather patterns, traditional forecasting methods, and community-based coping strategies. Representatives from key institutions involved in early warning systems and disaster management were included to align the research agenda with their mandates. During the workshops, participants were organized into groups, with designated days for different stakeholder categories to promote diverse perspectives and constructive dialogue. Appendix A includes the Terms of Reference for the workshop that was sent to workshop attendees as part of their invitation. Appendix B includes a description of the attendees.

Workshop Agenda

The workshops provided a platform for collaborative discussions, knowledge sharing, and the prioritization of research needs concerning climate shocks. Utilizing a common framework across all locations, the agendas were tailored to the participant groups on each day. Each workshop began with a context-setting plenary session to establish a shared understanding of recent climate-related shocks and identify key knowledge gaps. Participants then engaged in facilitated group discussions, presenting their findings in plenary sessions to encourage validation and idea exchange. Whenever feasible, a prioritization exercise was conducted to

identify the most pressing research needs and opportunities for strengthening early warning and anticipatory action systems. The agenda was adapted to reflect the roles and perspectives of different participant groups. Three of the workshops focused on institutional perspectives

from international organizations and government entities. The remaining three workshops focused on community-level experiences with local community members and civil society organizations. The workshop agenda and process document are provided in Appendix B.

Workshop Results

High-level Stakeholder Workshops

The high-level stakeholder groups were convened in Mogadishu, Garowe and Hargeisa, and included international organizations and government entities. Participants started the workshop by discussing the shocks that their regions commonly faced. These included droughts (all locations), desert locusts (all locations), floods (Mogadishu), cyclones (Garowe), conflict (Hargeisa), fire (Hargeisa), and disease outbreaks (Hargeisa). They then went on to discuss the role and challenges of using early warning systems and anticipatory action to mitigate the impacts of those shocks.

Discussions among stakeholders highlighted critical gaps in EW and AA systems in Somalia. Fragmented systems lead to inefficiencies in disaster management. It was noted that multiple organizations and government bodies issue overlapping and sometimes contradictory warnings. For example, agencies like the Puntland Information Management Center (IMC) and the Somalia Disaster Management Agency (SoDMA) lack collaboration, leading to inconsistent types of information and sometimes differing forecasts, leading to reduced trust in early warning responses. Local communities also see conventional early warning systems (EWS) as project-dependent and disconnected from local knowledge, hindering coordinated disaster management and crisis responses. There was consensus on the need for establishing a centralized early warning system led by government agencies like SoDMA, in collaboration with the Somali Water and Land Information Management (SWALIM) and the Food Security and Nutrition Analysis Unit (FSNAU) to enhance disaster preparedness for recurrent threats like droughts and floods.

Participants also expressed concerns about the reliability of information shared during emergencies, which has eroded trust among local communities and hindered timely response efforts. Stakeholders emphasized the need to improve data accuracy and integration of indigenous knowledge with scientific methods to build reliability and trust.

There was consensus on the need for investing in local capacities for

disaster preparedness through training locals and establishing/supporting response committees, which is vital for sustainable community engagement in early warning and action. There was also agreement on strengthening early warning systems, but opinions differed on building the capacity of entities like the Ministry of Humanitarian Affairs and Disaster Management (MoHADMD) in Puntland and Hirshabelle, and the National Disaster Management Agency (NADFOR) in Somaliland. Some stakeholders emphasized the need for training and resources, while others in Somaliland expressed scepticism about immediate feasibility due to funding and structural constraints.

The discussions also emphasized the importance of engaging the private sector in disaster risk management, noting that telecommunications companies and financial institutions could effectively disseminate early warning messages. For example, leveraging Caller Ring Back Tones (CRBT) has emerged as a viable method for reaching households with critical alerts. Additionally, innovative microfinance programs like Qard al-Hasan (interest free loans) were discussed as potential mechanisms to mobilize financial resources as a “forecast-based financing” for communities during climate crises.

Furthermore, stakeholders highlighted the need to translate early warnings into actionable, context-applicable ways. This involves establishing clear communication protocols and robust response strategies to ensure preparedness leads to effective crisis management. The hopes were that by connecting early warnings with subsequent actions, stakeholders aim to enhance the resilience of communities facing climate-induced vulnerabilities.

While a positive shift in attitudes toward anticipatory action has been observed among community members, with some individuals recently adopting destocking practices to mitigate losses ahead of anticipated droughts, there remains a need to strengthen resilience through community-led savings initiatives, financial support mechanisms, and enhanced early mobilization strategies. To further translate this attitudinal change into practical strategies, it is essential to invest in capacity-building programs, improve access to climate information, and establish policy frameworks that support proactive drought preparedness measures at both community and institutional levels.

During the discussions, participants mapped the stakeholders operating in the EW-EA space in Somalia.

Stakeholders Producing Early Warnings

- Somali Disaster Management Agency (SODMA): Monitors climate data and conducts risk assessments to generate early warnings for various hazards.
- National Disaster Forecasting Agency (NADFOR): Focuses on forecasting disasters and disseminates alerts to the public and relevant authorities in Somaliland.
- Ministry of Humanitarian Affairs and Disaster Management (MoHADMD): Coordinates the overall disaster management strategy, ensuring timely announcements of early warnings.

Stakeholders Supporting with Capacity Sharing

- International Organizations: Provide support, resources, and technical expertise to strengthen local capacities.
- Food and Agriculture Organization (FAO): Offers capacity building through training programs aimed at improving agricultural resilience in disaster-prone areas.
- World Food Programme (WFP): Provides logistical support and integrates early warning messages into its operations to enhance food security during crises.
- International Organization for Migration (IOM): Supplies expertise for assessing population movements and vulnerabilities in the context of disasters.

- Academia and Research Institutions: Contribute research and development insights to enhance early warning systems and methodologies to improve prediction and communication strategies.

Stakeholders Performing Anticipatory Actions

- Government bodies like SODMA and NADFOR issue early warnings and initiate anticipatory actions based on these alerts, including resource mobilization and community preparedness campaigns.
- International Organizations and INGOs such as Save the Children, Norwegian Refugee Council (NRC), and CARE implement anticipatory actions by mobilizing resources for affected populations and coordinating immediate response efforts based on early warning indications.
- Local Stakeholders (NGOs and Community-Based Organizations) ensure that anticipatory actions are relevant and effectively executed within communities by translating early warnings into actionable steps, such as capacity building, training local volunteers, and implementing disaster preparedness and response programs.

Key Priorities for High-Level Stakeholders:

- Centralization of Early Warning Systems:** Currently, early warning systems in Somalia, Puntland and Somaliland operate in a fragmented manner, resulting in overlaps and delays in information dissemination and emergency response. Establishing a centralized system under SODMA for Somalia, for example, would clarify the roles and responsibilities of agencies like SWALIM and FSNAU. This centralization would enhance coordination among disaster management entities, facilitating more efficient resource allocation and improved communication strategies.
- Capacity Building within Agencies and Organizations:** Government agencies, such as the Somali Disaster Management Authority (SODMA) in Somalia, Humanitarian Affairs and Disaster Management Authority (HADMA) in Puntland and the National Disaster Preparedness and Food Reserve Authority (NADFOR) in Somaliland, often face limitations in resources and expertise, which hinders effective policy implementation and disaster response coordination. Investing in capacity-building initiatives is essential to enhance the skills and capabilities of these agencies through targeted training programs, workshops, and resource enrichment, ultimately improving their preparedness and response capacity.
- Private Sector Engagement:** The private sector plays a vital role in disaster response in Somalia and Somaliland, yet its potential for supporting EW and EA remains largely untapped. Private sector grants and donations directly support disaster recovery efforts and private entities also mobilize resources through microfinance initiatives like Qard al-Hasan, providing crucial financial solutions to affected communities. How can we build up the engagement of this sector with EW and EA? How can they be shown the value of investing in their community's preparedness?
- Remittances from the diaspora** are a critical financial lifeline for many families during crises, aiding families and stimulating local economies. While diaspora communities provide donations and financial support during emergencies, they have a low appetite for disaster preparedness. Participants acknowledged remittances as a stabilizing force for communities facing disasters, highlighting the need to leverage these financial flows and private sector contributions to enhance disaster resilience, as they respond faster than NGOs and other stakeholders. However, strategies for better engaging the diaspora to mobilize resources for anticipatory actions remain unclear, as their focus is primarily on response during emergencies.
- Integration of Modern and Traditional Knowledge:** A key challenge for early warning systems is the scepticism towards modern forecasting practices among local communities, who often rely on traditional weather prediction methods. Bridging this gap requires greater engagement and understanding of communities needs and how they assess forecast quality. Integrating modern scientific data with indigenous forecasting techniques, local contexts and local information systems can enhance the credibility, acceptance

and value of early warning messages, making them more relatable and actionable for local populations.

- **Resource Mobilization and Funding:** Sustainable funding is crucial for maintaining and improving disaster management initiatives. However, many programs suffer from inconsistent financial support, undermining their effectiveness. Stakeholders should prioritize establishing sustainable financing mechanisms that involve partnerships with international organizations and private sector entities. These collaborations can provide the necessary funding and resources to develop

robust early warning systems and enhance community preparedness.

- **Translating Early Warning into Action:** A challenge is translating early warning alerts into timely actions. It is vital to develop mechanisms that ensure a connection between issuing warnings and implementing response strategies. This includes creating clear communication protocols, defining response strategies, and coordinating efforts among stakeholders, including government agencies, NGOs, and community organizations.

Community-level Stakeholder Workshops

The community-level workshops focused on engaging community members, civil society organizations, and local NGOs. Discussions emphasized the vulnerability of communities to disasters and the role of traditional knowledge and early warning systems.

The initial discussion on shocks, early warning, responses and challenges varied quite dramatically between location. In Mogadishu, participants highlighted Beledweyne's susceptibility to flooding, emphasizing reliance on social media (e.g., updates from local figures) and traditional forecasting methods. Challenges included limited technology, lack of inclusivity for vulnerable groups, and mistrust in existing systems. In Garowe, discussions centred on Bandarbeyla's exposure to cyclones and monsoon winds. Sand dune formation, inadequate forecasting equipment, and poor road infrastructure were identified as significant barriers to effective response. In Burao, local communities discussed the impacts of drought and the importance of integrating traditional knowledge into EWS. Challenges included low awareness, mistrust in external systems, and insufficient resources for proactive preparedness.

During the discussion, participants expressed a lack of trust in formal early warning systems, favouring local information from family and community members over government or NGO sources, which were often viewed with scepticism. This reveals a tension between traditional knowledge and modern forecasting methods, as many community members cited credibility issues with official communication channels. Trust in information sources varied significantly; some participants voiced doubts about the reliability of government alerts,

preferring insights from trusted friends, family, or local leaders familiar with community dynamics. Conversely, others found government alerts useful and trustworthy, actively engaging with officials during assessments, especially in disaster situations. This trust in government alerts was affirmed by elders from Beledweyne and Banderbyla.

The role of digital platforms, particularly social media, was also discussed. Some participants acknowledged the progress these platforms brought in facilitating rapid information dissemination. For example, elders from Beledweyne discussed the role of social media activist Shamuuri in sharing timely alerts as water levels in the Ethiopian village of Limay Rose. At the same time, they mentioned concerns about the inconsistency and reliability of information such platforms provided. Many pointed out that social media can inadvertently propagate misinformation, complicating community responses during emergencies. The fact that social media is already a powerful tool for disseminating early warning messaging but that there are concerns about misinformation, imply that developing simple methods for users to verify information or identifying trusted sources could be an impactful investment.

An important aspect of the conversation was the value of traditional knowledge in understanding and predicting environmental changes. Participants emphasized the significance of indigenous practices, such as reading cues from nature and recognizing historical weather patterns, in anticipating phenomena like droughts. These practices, honed over generations, often resonate more strongly with local contexts than standardized scientific predictions. Recognizing and

integrating traditional knowledge into official early warning systems not only enhances their effectiveness but also fosters trust among community members. However, participants acknowledged differing opinions regarding the preservation of these traditions, particularly among younger generations.

Some expressed concern over the erosion of traditional practices and advocated for educational initiatives to revitalize them, emphasizing their relevance in modern contexts. Others pushed for a complete transition to scientific methods, indicating a potential divide that could overlook the synergy between both approaches. Fostering educational initiatives that respect and integrate traditional knowledge with scientific understanding could lead to more holistic disaster preparedness strategies.

Several barriers to effective anticipatory actions were identified, including insufficient funding, inadequate infrastructure, and communication challenges prevalent in rural areas. Participants noted that existing early warning systems often lack precision and timeliness, which can lead to critical delays in responding during emergencies. They suggested several improvement strategies, such as developing a centralized communication platform for timely information dissemination, establishing localized early warning committees tailored to specific community needs, and investing in training local disaster preparedness teams. These initiatives could facilitate better resource management and enhance overall communication, leading to more effective disaster response.

The discussions underscored the importance of community engagement, with participants agreeing that collaboration between local

entities and government organizations is crucial for improving the efficacy of anticipatory actions. Engaging community members actively enhances the accuracy of information dissemination and fosters deeper trust in the systems designed to protect them. This spirit of cooperation can lead to a supportive environment where diverse voices are heard, contributing to more nuanced and effective disaster management strategies.

Fostering local engagement in disaster preparedness emerged as a critical theme, with participants emphasizing the need for inclusive processes that empower communities. Strengthening the roles of various groups, including religious leaders, women's organizations, and youth associations, in disseminating information and mobilizing responses was deemed essential. This empowerment diversifies information sources and enhances the community's ability to respond effectively to disasters. Participants also recognized the importance of accommodating minority groups, such as women, children, and individuals with disabilities, in creating equitable disaster awareness strategies. This includes using visuals like billboards to ensure all community members feel valued and informed about weather shocks. Community members also discussed various local actors that could support improving EW and EA. While this discussion was less formalized than the ones in the higher-level discussions, they identified two groups that could be critical to improving the uptake of EW and preparedness. First, religious and traditional leaders are trusted figures who can promote disaster preparedness and inclusivity. Second, civil society organizations and local NGOs play a vital role in raising awareness, supporting vulnerable groups, and facilitating community engagement.

Key Priorities for Community-Level Stakeholders

- Community-Based Early Warning Systems:** Strengthen local structures and train community members to improve preparedness and response. Establishing community-based early warning systems empowers locals to identify risks and act during emergencies. Training programs are required to equip members with skills for assessing threats and developing measures, reducing vulnerability and increasing resilience.
- Inclusivity and Accessibility:** Ensuring early warning messages reach vulnerable groups, including women, children, and persons with disabilities requires that communication strategies are tailored to the diverse needs of these groups. There is a need to employ accessible methods across platforms to enhance the effectiveness of critical information. This inclusivity ensures that no one is left behind during crises, fostering a more informed and proactive community.
- Traditional Knowledge Integration:** Integrating local forecasting methods into formal disaster management systems can enhance trust and relevance of the forecasts. Valuing traditional knowledge builds community trust in early warning systems and ensures cultural appropriateness. Incorporating local practices allows communities to feel connected to disaster management initiatives and provides resonant tools, enriching preparedness efforts and fostering a stronger sense of ownership.
- Education and Awareness:** There is a need to increase community awareness of disaster risks and preparedness strategies through targeted campaigns. By raising awareness, individuals can be empowered to make informed decisions during emergencies, reducing panic and confusion. Workshops and information sessions could be used for these activities, both to provide education and to strengthen community bonds, encouraging collective action for enhanced preparedness.
- Resource Mobilization:** Empower local communities with financial and technical resources to build resilience against disasters. This priority aims to strengthen communities by facilitating access to essential resources for resilience-building initiatives, such as infrastructure improvement and capacity development programs. Providing local stakeholders with these resources fosters sustainable development and equips communities to withstand and recover from disasters effectively, leading to strengthened resilience and improved preparedness.

Comparative Analysis of Stakeholder Perspectives

High-level stakeholders emphasized a structured, policy-driven approach to developing early warning systems. Their focus was on creating frameworks that facilitate coordination among various agencies and improving technical capabilities for effective disaster response. They advocate for utilizing advanced technologies, such as data analytics and centralized information systems, to enhance the timeliness and accuracy of disaster warnings. Their perspective is rooted in the need for systemic change to improve institutional capacities and foster collaborative partnerships.

In contrast, community-level stakeholders prioritize localized needs and the integration of traditional knowledge into disaster management. Their insights come from direct experience with disasters, such as droughts and flooding. Community participants emphasize the importance of tailoring early warning systems to reflect their unique vulnerabilities and contexts. They prefer communication that is accessible, clear, and based on established social networks. The community perspective underscores the necessity of involving local voices in decision-making processes to ensure effective and culturally relevant solutions.

Both groups agree on the increasing frequency and severity of climatic events affecting the area. Stakeholders from both sides acknowledge the critical role of timely and accurate information in enhancing preparedness and response efforts. However, they diverge significantly in their approaches. High-level stakeholders often advocate for centralized control and standardization of data collection methods, while community

members highlight the importance of preserving and utilizing indigenous knowledge systems that have historically guided localized responses.

Trust and credibility issues also emerge as a point of contention. High-level stakeholders reference the importance of building trust in public initiatives, citing previous failures and communication gaps that have undermined community confidence in early warning systems.

Conversely, community members express skepticism about the effectiveness of these systems, often feeling that warnings are either too late or insufficiently detailed to inform actionable responses. This disconnection reveals a critical barrier to successful implementation — the need for genuine engagement and collaboration between high-level planners and local communities.

Both groups recognize the need for improved collaboration and coordination. High-level stakeholders push for the formation of task forces and strategic alliances to unify response strategies. In contrast, community stakeholders seek meaningful involvement in these frameworks, advocating for their insights to drive the development of early warning systems that resonate with local realities.

In conclusion, bridging the gap between high-level and community stakeholders is essential for developing effective early warning systems in Somalia/Somaliland. While both groups align on the urgent need for preparedness against climate-driven disasters, contrasting views on implementation strategies necessitate ongoing

dialogue and a commitment to integrating local knowledge into broader policy frameworks. This collaboration can enhance resilience, empower communities, and ensure that anticipatory actions reflect the needs and capacities of the population they aim to serve.

Emerging Thematic Priorities

In this section, we draw on existing literature and the opportunities prioritized by workshop participants, to identify themes that desperately need investment. We have grouped these themes into two categories: improving the value of EW information and enhancing the effectiveness of responses to forecasted shocks.

Improving the Value of EW Information

While forecasts may be accurate, they are not necessarily valuable. Research has shown that for EWS to be valuable, they must to be trusted (consistent, harmonized), received by the appropriate person (mode), be tailored to the needs of the recipient (timing & content) and presented in a way that the recipient can understand (packaging of information & capacity of recipient). The need for improvement along these and other dimensions were a main point of discussion throughout all the workshops. The following research priorities aim to address several challenges to the value of EW identified by stakeholders during the workshops.

- **Harmonization of Early Warning Systems (EWS):** Fragmentation in EWS leads to confusion and uncoordinated responses. Developing a framework that integrates government entities, international organizations, and local communities to create a harmonized EWS would help identify gaps, provide consistent messaging, promote collaboration among stakeholders to share data and coordinate responses, and improve the timeliness and relevance of warnings to at-risk populations. This work involves assessing current systems for deficiencies in information timing, presentation, dissemination and accuracy.
- **Impact-Based Forecasting:** Transitioning to impact-based forecasting methods that provide actionable insights is critical. This work will focus on developing forecasting systems that address specific vulnerabilities and potential consequences of climate-related shocks, ensuring that early warnings are clear and actionable.
- **Transforming External Forecasts into Inclusive and Valuable EWS for Communities:**

- **Information Content, Packaging & Modes of Delivery:**

Tailoring information to the needs of recipients is critical for its value. This activity focuses on the packaging and delivery of information to clients. It will explore innovative approaches to partnering with the private sector, especially telecommunications companies, to mobilize resources and efficiently disseminate early warning information, such as through Interactive Voice Response (IVR) messages, social media and mobile applications, to effectively reach diverse community members. This also involves presenting Early Warning information in clear and accessible language, ensuring that local communities understand its impact and critical importance.

- **Community-Based Systems and Inclusivity:**

This work will focus on integrating traditional knowledge into formal disaster management systems to enhance the effectiveness of EWS. It aims to ensure that vulnerable groups, including women, children, and differently-abled persons, can access critical information through inclusive communication methods. By incorporating local practices, the study

seeks to improve community trust in EWS and explore strategies for building trust and collaboration between communities and disaster management authorities, including effective communication of early warning messages to marginalized populations. The role of community leaders and committees in information dissemination and strengthening local response capacities will be a key aspect of this research.

- **Capacity development of community members:**

Developing community members' capacity is essential for understanding EW, and improving disaster preparedness and response. This includes designing and implementing training programs focused on preparedness, response strategies, and EWS frameworks. Effective resource mobilization is necessary to build partnerships that provide funding and technology for these initiatives. Ongoing awareness campaigns should educate community members about EWS, how to access their forecasts, how to interpret them, and how to respond to them.

Improving the Effectiveness of Responses to Forecasted Shocks

Once early warnings are received and understood, it is critical that effective measures are activated. While communities may wish to respond to forecasts of coming shocks, they may lack the action plans or resources to do so effectively. Research has shown that anticipatory actions by outside organizations can mitigate the impacts of these shocks, whether through prepositioning resources or directly supporting communities directly. However, AA represents only a small portion of the humanitarian response budget for various reasons. The workshop participants identified specific barriers to AA in the Somali context. This agenda aims to improve communities' responses to EW and effectiveness of external AA interventions.

- **Community Action Plans:** Once community members receive and understand early EW, the information should initiate effective preparedness measures. This work will focus on creating mechanisms that ensure early warnings lead to prompt and actionable responses. It emphasizes the need for strategies linking early warning messages with defined response protocols, allowing for timely interventions that can mitigate risks. Establishing clear pathways from warning to action will enable communities to better prepare for and respond to imminent threats.
- **Community Attitudinal Change:** This involves supporting communities in adopting proactive and positive anticipatory actions to respond to forecasted shocks, emphasizing the critical importance of understanding and preparing for expected impacts as well as the role of social norms and psychological

features in impacting behaviours related to preparation and response.

- **Improved Coordination Mechanisms:** Strengthening collaboration among stakeholders is vital for enhancing AA. This research will identify coordination challenges and propose frameworks for better integration of efforts from local communities to national agencies. Improved coordination will facilitate efficient resource allocation and cohesive disaster responses.
- **Policy Improvements:** Addressing gaps in disaster risk management policies is crucial for effective disaster response. Establishing clear policy guidelines for disaster management is a primary aim of this research priority. By analysing current policies within Somalia's humanitarian response framework, the study will identify areas needing improvement and propose culturally and contextually relevant policy recommendations.
- **Private Sector Engagement:** Engaging local businesses is critical for disaster recovery. Leveraging mobile technology for early warning information and implementing microfinance solutions, such as Qardhul Hasan and micro-investment programs, can enhance community preparedness. Qardhul Hasan is a zero-charge, group-based financing model for entrepreneurs, while micro-investment offers relationship-based banking for individuals and small businesses commonly at a profit rate of approximately 7%. These programs provide financing of \$500 to \$1,000 and \$1,000 to \$3,000, respectively, to be

repaid within 12 months. Collaborating with local enterprises bridges funding gaps and fosters a responsive network of resources, ensuring a more efficient disaster response.

- **Sustainable Financing:** This focuses on establishing sustainable funding mechanisms, such as pooled funding, to support anticipatory actions and long-term resilience initiatives. The research will explore partnerships among public, private, and non-governmental sectors to identify innovative financing strategies

that provide ongoing support for disaster preparedness activities. Sustainable funding is essential for maintaining and enhancing the effectiveness of early warning and response systems. The study will analyse successful funding models and assess their applicability within the Somali context to improve resource mobilization for resilience-building efforts.

Proposed Research Agenda & Research Questions

Drawing from those themes, we have identified several promising research agendas for the GFFO project to develop that could have a strong positive impact on pastoral households. We develop them further here, outlining researchable questions and realistic strategies for examining them.

Early Warning for Community Action:

While early warning is currently available, communities rarely act on it for a variety of reasons. Importantly, the messaging frequently does not reach those who need it and, when it does, it is often in a format or contains language that is not accessible to the user nor does it contain content that meets their informational needs. Added to that is an understandable lack of trust in information that is not well understood and whose accuracy, producers are not in a position to precisely assess. The result is an EWS that generates weather forecasts that do not help producers and communities prepare for forecasted weather as much as they could.

The workshops and literature have identified several characteristics that are important for EWS to effectively support community members.

- **Co-development:** Early warning systems need to be co-developed with communities to ensure that they meet the needs of clients (see items below) and to facilitate buy-in and build trust.
- **Language:** All content needs to be delivered in local languages.
- **Localized content:** Measurements and forecast probabilities need to be repackaged to refer to local impacts.
- **Timing:** The frequency of information and lead times in the forecasts need to reflect the decision-making process that clients face. Farmers that grow crops need seasonal precipitation estimates and precise (e.g., weekly or even daily) forecasts near planning time while pastoralists require information on likely biomass and surface water availability with lead times to plan for migration and livestock off-take.

- **Channel of delivery:** Information needs to be delivered through a variety of channels to ensure that it is accessible to different types of individuals.
- **Format of delivery:** Information needs to be tailored to the capacities of clients, ensuring that they are accessible to individuals of all abilities and backgrounds
- **Linking with local systems:** Linking local knowledge with external EWs - this can build trust, leverage existing knowledge networks and support traditional knowledge.
- **Two-way communication:** Validation and feedback processes must be put in place so that the EWS can respond to the changing needs of community members as well as to improve forecast models.
- **Capacity sharing and local champions:** Building capacity of communities to

better understand the content, strengths and weaknesses of EWS is important. Systems for ensuring that there are at least several community members that have considerable knowledge of how EWS work can help reduce misinformation and misunderstandings. Schools and the children that they educate are one of several promising channels for developing these local EWS champions.

At its heart, this research agenda aims to increase the extent to which communities are prepared for forecasted shocks. We have identified the following research questions that work towards this goal. It does so by identifying effective strategies for addressing several barriers to value that have been identified. In this, special attention is made to ensure that EW messaging is available and useful to all individuals in society, not only those that are most easily reached.

Research Questions

- Which types of forecast information (e.g., weekly precipitation, biomass outcomes) and what timing (frequency, lead periods) are most needed by community members? *
- Which channels of communication are best suited to communicate forecast information to community members? *
- How can the inherent characteristics of forecasts—probabilities, spatial variation, temporal aspects—be clearly communicated to community members in a useful way? *
- How can external early warning information most effectively be integrated into forecasting and weather information services that are currently relied on? *
- What adjustments in language, channel, content, information, and packaging can feasibly be made within the EWS and which components will need to happen after the information leaves that system?
- What strategies for building local understanding of EWS are most effective?

* Cross-cutting assessment: Research questions with an “*” after them need to be assessed for variation across economic status, livelihood, age, abilities and gender.

Changing Attitudes of Community Members Towards EW & AA

Pastoralist communities in Somalia have traditionally relied on mobility, social networks, and indigenous knowledge to cope with climate variability, particularly during droughts. However, recent observations suggest a gradual shift in attitudes towards EW and AA. One notable example is the emerging practice of purchasing fodder to sustain livestock during drought periods—an adaptation strategy that was previously unprecedented. This shift, alongside other preparedness strategies such as destocking and purchasing inputs, indicates a growing awareness of the need for broader attitudinal change. While these changes are still in their early stages, they reflect an evolving mindset where communities are beginning to

integrate formal early warning information with traditional coping strategies. Factors driving this shift include increased exposure to climate-related risks, awareness campaigns, and the growing recognition of the economic benefits of early action in reducing livestock losses and sustaining livelihoods.

Despite these emerging shifts, several challenges continue to hinder a broader attitudinal transformation towards EW/AA. Many pastoralists' attitudes reflect gaps in understanding of the economic benefits of preparedness, limiting proactive measures like buying fodder or diversifying income. There are also several human behavioural/psychological features that bias us away

from many different types of preparedness measures. Additionally, structural barriers, including limited market access, weak financial inclusion, and inadequate policy support, slow down community attitude change. Schools and children also play a critical role in shaping future attitudes toward preparedness, as children represent both the next generation and a communication channel to the current household decision makers. Integrating climate awareness into education

can foster long-term behavioural change. To build on these initial attitude changes, further research is required to examine current attitudes, the factors influencing this attitudinal shift, identify opportunities for strengthening these systems, and to explore the role of financial mechanisms, psychology, education, and community engagement in fostering long-term behavioural change and the adoption of anticipatory action.

Research Questions

- What are the key factors influencing the uptake and adoption of early warning information in pastoral communities in Somalia? What factors are important for converting uptake of early warning information into anticipatory action? How do contextual factors such as mobility patterns, informal knowledge systems, and institutional trust contribute to this disconnect?
 - What are the attitudes towards EWS/AA in Somalia, how have they been changing, and what are the key drivers and barriers influencing greater use? *
 - To what extent have changing attitudes toward EWS and AA translated into concrete behavioural changes, such as improved preparedness planning, adoption of new coping strategies, or earlier action in response to climate warnings? *
 - How can financial inclusion, market access, and policy support enhance the ability of pastoralist communities to take proactive anticipatory actions, such as purchasing fodder or selling livestock strategically? *
 - Are there lessons from behavioural economics and psychology that could help increase the use of preparedness?
 - What interventions or support mechanisms are needed to sustain and accelerate the ongoing positive shift in community attitudes toward anticipatory action? *
 - What role do education and intergenerational knowledge transfer play in shaping long-term attitudes and practices toward climate preparedness and anticipatory action within pastoralist communities? *
 - How do children and youth in pastoralist communities in Somalia access, interpret, and use climate information, and what role do they play in influencing household and community-level preparedness actions? How can schools and child education systems be used to both build the capacity of children as change makers?
- * Cross-cutting assessment: Research questions with an “*” after them need to be

assessed for variation across economic status, livelihood, age, abilities and gender.

Increasing Private Sector & Diaspora AA Investments

In Somalia, the private sector plays a crucial role in recovery and development. While the Somali private sector, ranging from small businesses to larger corporations, has the potential to contribute to community development and humanitarian efforts, its engagement in humanitarian activities has historically been limited. One challenge is that the private sector often prioritizes short-term gains over long-term investments in community resilience, raising concerns about sustainability. A significant barrier is the perception of value in investing in disaster preparedness. Many firms tend to overlook the benefits of committing resources to anticipatory actions, instead focusing on emergency responses when immediate needs are apparent and their support can have a direct impact.

To encourage greater participation, it is crucial to highlight the long-term advantages of investments in AA for community welfare, total cost, and in cushioning communities against recurring shocks. Additionally, the low level of trust between communities and external donors creates an opportunity for local private sector engagement. Local businesses are often viewed as more responsive supporters during times of need and can help bridge the gap between communities and external assistance.

Research Questions

- To what extent does the private sector currently contribute to humanitarian and development initiatives in Somalia, and how can we measure their impact?
- What mechanisms do private sector actors use when responding to crises in Somalia, and what factors influence their decisions between in-kind support and monetary donations?
- Are there differences in how private and public sectors engage with AA that provide an opportunity for cross-sectoral learning?
- How effective are private sector contributions in meeting the specific needs of communities affected by crises, and what metrics can we use to assess their impact?
- What strategies can be implemented to more effectively engage private sector firms in AA, and how can we demonstrate the benefits of early investment in disaster preparedness?

- How can we encourage a transition from in-kind support to cash contributions among private sector actors, and what incentives or frameworks would promote this shift?
- To what extent are remittances provided for AA and what strategies could be used to increase their role?

Dissemination & Socialization of Research Priorities

Effectively disseminating and socializing research priorities is essential for ensuring that key stakeholders engage with the research, both by continuing to help guide its priorities and so the its findings reach relevant stakeholders and inform decision-making processes. In the following, we outline several critical components of a successful strategy.

- **Identifying Target Audiences**-Identify and engage target audiences that will benefit from the research, including government agencies, NGOs, community leaders, and the private sector. Conducting a stakeholder analysis helps understand their roles, interests, and influence. Understanding stakeholder needs allows research to be tailored to address specific concerns, making findings more relevant and actionable.
- **Developing Clear Messaging**- Once target audiences are identified, develop clear and compelling messaging that effectively conveys research findings. Complex outcomes should be distilled into concise, actionable insights. Use simple language, illustrative examples, and visual aids to enhance comprehension. Tailor communications to different groups, such as policymakers and community members, to increase engagement and application of findings.
- **Utilizing Diverse Dissemination Channels**-Employ various dissemination channels to maximize reach and impact. Workshops and seminars allow direct engagement, while webinars extend participation to remote individuals. Accessible reports and policy briefs summarize key priorities in layman's terms. Leverage social media platforms like Twitter, Facebook, and LinkedIn to share insights widely and engage younger audiences.
- **Fostering Collaboration and Partnerships**-Collaboration is integral to a successful dissemination strategy. Engage local organizations, especially

community-based NGOs, to enhance trust and outreach. These entities can help tailor messages and facilitate discussions. Partnering with private sector entities can provide valuable resources and networks, amplifying the research's impact and increasing its likelihood to influence policy and practice.

- **Promoting Inclusivity**—Promote inclusivity in presenting and sharing research findings. Materials should be available in local languages and formats accessible to individuals with diverse abilities. Actively involve marginalized groups—such as women, youth, and individuals with disabilities—to ensure their voices are integrated into the research narrative. This inclusivity enriches the research and fosters a sense of ownership among communities, encouraging effective engagement with findings.

Dissemination and socialization will continue to be important as this project proceeds. At this stage, we suggest that Save the Children and the Jameel Observatory develop a 2-page

summary of the research priorities proposed in this report. That summary, along with this longer report, can be shared with our broader partners to elicit feedback.

We suggest then engaging a few key and motivated stakeholders to help develop the research plan, which is the next step in this agenda. These stakeholders can help ensure that the research stays focused on research questions that are relevant and important to the sector. Once the research plan has taken form, we could then hold a workshop to elicit feedback from a wider group of stakeholders.

We note that the Jameel Observatory will be holding a research-focused Community of Practice meeting in Addis Ababa in May and a more general Community of Practice in Nairobi in Q4 of 2025. Either of these meetings could be useful venues for disseminating plans/findings and eliciting feedback. Both the International Livestock Research Institute (ILRI) and Jameel Observatory have communications channels that can be used to publish blogs, policy briefs and many other types of dissemination options.

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Appendix A: Terms of Reference for Co-Creating a Research Agenda for Localized Anticipatory Action

Background

Save the Children International (SCI) is a non-governmental non-profit organization whose mission is to fight for children's rights and deliver immediate and lasting solutions to children's lives worldwide. SCI has been operational in Somalia for over 40 years. SCI is investing in programs and projects addressing all-round problems faced by children, and their parents. The programs aim at improving Health, Nutrition, Protection, Child Rights Governance, Education and Food Security and Livelihoods (FSL) of children and their families in Somalia. Save the Children International significantly invested in humanitarian and development projects through the financial and technical support of the international donor community. An ambitious 2024-2027 SCI Country Strategic Plan highlights the importance of strengthening the operational capacity of the health and livelihood system through innovative breakthroughs by creating synergies between humanitarian and development intervention with intention of maximising impact for every child.

About the GFFO SAADAAL Project

Natural disasters pose a significant threat to the populations in our target locations and can have devastating humanitarian consequences. The increase in extreme weather events, caused by climate change, exacerbates existing vulnerabilities and negatively impacts the livelihoods of poor communities, leading to loss of life, livelihoods and displacement.

To address these challenges, Save the Children is currently implementing a project in Somalia (Burao, Beledweyne and Banderbeyle districts), in collaboration with relevant partners in line with Somali national plans and priorities. This project is funded by Germany and focuses on strengthening local and national systems and capacities in early warning and anticipatory action programming. It provides valuable learning opportunities for disaster preparedness, early warning systems, data collection, and trigger development for anticipatory action.

The targeted regions of Somalia (Togdheer, Bari and Hiran) serve as a suitable case study to understand how anticipatory action can shift the focus from reacting to hazards to actively anticipating them in the context of a protracted crisis to minimise their impact on vulnerable populations.

Goals and Objectives

The goal of the workshop is to identify key research priorities and to co-create a research and learning agenda aimed at meeting those priorities that are most pressing.

- To meet this goal, the workshop will
- Detail the preparedness, impact and response timelines of various stakeholders
- Identify and prioritise key challenges to more effective preparedness
- Suggest approaches for addressing and learning about challenges that were prioritized, keeping in mind the project's focus on system strengthening and scale.
- Developed research and learning agenda from those priorities and suggested approaches.
- Agree on the framework for progressing the developed research and learning agenda.

Participants' Role

Participants of the workshop are asked to contribute throughout the workshop to help co-develop the learning agenda. This will include discussing the impacts of shocks and challenges to better preparedness, either

in the context of the organization that they represent or for themselves as producers. For a learning agenda to be valuable, it needs to reflect the broad diversity of its stakeholders, so it is important that each individual participate, as they have been carefully selected to represent a sector or group of stakeholders.

Participants

Stakeholders from across several sectors have been invited to the workshop. This includes but is not limited to the following.

- Primary producers (e.g., farmers, pastoralists, fisherfolk)
- Local civil society including community-based disaster risk management committees
- Non-government and UN organizations engaged in drought preparedness or response
- Local and national government agencies providing weather information services or engaged in drought preparedness and response.
- Local and regional research institutes.

Appendix B: Workshop Agenda & Process Document

- Workshop location, date and facilitators: February 16-22
- 16th-17th Feb in Mogadishu
 - Muzzamil Abdi
 - Jaabir Hussein
 - Mohamed Beegsi
 - Adan Faradhub
 - Said Mohamed
- 19th-20th February Garowe
 - Muzzamil Abdi
 - Adan Faradhub
 - Said Mohamed
- 19th February Hargeisa (Group A), 22nd February Burao (Group B)
 - Jaabir Hussein
 - Mohamed Beegsi

Objective

To work with local stakeholders to collectively identify research priorities aimed at reducing the impacts of predictable crisis impacts using localized inclusive (and where feasible child-centred) anticipatory action in Somalia.

Process Summary

The project will hold two workshops in each location. The first day will be for participants from international organizations and government (Group A). The second day will focus on local community members, civil society organizations, and local NGOs (Group B).

As facilitators, we need to keep our objectives in mind. While we are not asking the participants to articulate research questions, we are aiming to use the discussion to identify and develop a research agenda that is relevant. This can mean guiding the discussion away from those topics that are not so relevant for our objectives and then probing deeper when the discussion has seemed to identify important research options.

Note that the objectives of the small groups are listed above in italics. If we can get a few points related to each objective, we are happy. The discussion questions are there to help generate discussion around those questions but the groups do not necessarily need to respond to each one.

Daily Schedule

Time	Activity	Activity #
800-830	Registration	1
830-900	Introductions	2
900-1000	Plenary on shocks	3
1000-1015	Tea	
1015-1215	Small groups	4
1215-1315	Lunch & prayers	
1315-1430	Plenary reporting back	5
1430-1530	Plenary prioritization	6
1530-1545	Closing summarizing the prioritization and thanks	7

Attendee Groups

Stakeholder	Target #	Day Group	Mogadishu , Southern States	Garowe , Puntland	Hargeisa , Somaliland
Day 1					
SC	3	A	CO, RO, MO	CO, RO, MO	CO, RO, MO
UN	3	A	UNOCHA, FAO, WFP	UNOCHA, FAO, WFP	UNOCHA, FAO, WFP
Government	3	A	SoDMA, MoECC	MoHADMA, MoECC	NODFAR, MoECC
IGAD	3	A	ICPAC, CAEP, IDRISSI		
INGO	3	A	WVI, Care, NRC, Oxfam	WVI, Care, NRC, Oxfam	WVI, Care, NRC, Oxfam
Research	3	A	CJ, ICE, Heritage, BU, SNU, SPARC, PASSAGE	SIDRA, PDRC, PSU	UoH, AU,
Total	18				
Day 2					
Local NGO	3	B			
Community	3	B	Community planning (e.g., elders, social groups, committee, organizations)	Pastoralist groups, pastoralists, livestock traders, fishermen and related, elders, women associations, IDPs	Pastoralist groups, pastoralists, livestock traders, elders, women associations, IDPs
Community	3	B	Pastoral folks and related markets	Pastoral folks and related markets	Pastoral folks and related markets
Community	3	B	Farmers and related markets		
Community	3	B	CBDRM	CBDRM	CBDRM
Total	15				

Workshop process (Group A, 1 Day)

1. Arrival and registration
2. Plenary: Save the Children intro to the process, project, preparedness, etc.
3. Plenary: Discussion about the objective of the workshop etc.

The objective with activity 3 is to get participants thinking and talking about shocks. In activity 3.b, the facilitator should focus on just 1 recent shock and elicit responses about that shock from different people to show the diversity of experiences. This activity is also aimed at preparing the participants for the process that will be used in the small groups.

- A. Discussion on shocks in the region.
- B. Discuss the most previous important weather shock:
 - i. Did their organizations know that the shock was coming?
 1. Where did they get the information from? And what was the source of the information? (probe for both local and ‹scientific› sources of information)
 2. How confident were they with the information/source? Did they trust it? Were there other sources of information that they heard but did not trust?
 - ii. How did their organization or agency start to prepare for the shock? This includes their organizations' internal preparations and actions intended to support others to prepare.
 1. Which preparation actions were helpful and how?
 2. What do they wish they had done differently?
 3. Are the ways that you respond to shocks changing from how you responded in the past? How? Why?

4. Small groups (2-3 groups of 5-10 individuals)

Our preference is for groups to be composed of individuals that speak the same language so that discussion can take place fluidly and to have a facilitator for each group that can speak the appropriate language.

Our objective in the small group exercise is to identify opportunities and barriers to helping communities better prepare for forecasted shocks.

Talk through the processes of EW/EA within your organizations during the last shock (e.g., recent floods)

Who is responsible for each of those processes?

What are the key enabling policies that govern those processes?

Which processes enable you to plan and deliver that plan related to EW/EA support to communities?

Which challenges do you face in EW/EA support to communities?

What are the opportunities and barriers to strengthen existing local systems for responding to coming shocks?

To what extent do your organizations engage with existing community EW/EA structures and activities? How do you engage? What are barriers to greater collaboration between those community systems and those of your organization?

How could your ability to use EW/EA to effectively support communities be sustainably improved?

Plenary: Groups present back on their discussions

Plenary: Prioritization of existing opportunities for more effective and inclusive EW/EA, challenges to taking advantage of those opportunities and what needs to be overcome to address them?

Plenary: Closing by summarizing the priorities and thanking the participants.

Workshop process (Group B, 1 Day)

Arrival and registration

Plenary: Save the Children intro to the process, project, preparedness, etc.

Plenary: Discussion about the objective of the workshop etc.

The objective with activity 3 is to get participants thinking and talking about shocks. In activity 3.b, the facilitator should focus on just 1 recent shock and elicit responses about that shock from different people to show the diversity of experiences. This activity is also aimed at preparing the participants for the process that will be used in the small groups.

Note that not all community members will be familiar with terms such as early warning, anticipatory action. Use this group discussion to familiarize participants with these and other important terms (e.g., preparedness, forecasting).

Discussion on shocks in the region.

Discuss the most recent important weather shock:

Did they know that the shock was coming?

Where did they get the information from? And what was the source of the information? (probe for both local and ‹scientific› sources of information)

How confident were they with the information/source? Did they trust it? Were there other sources of information that they heard but did not trust?

How did they prepare? Was it effective?

What do they wish they had done differently?

Are the ways that you respond to shocks changing from how you responded in the past? How? Why?

Small groups (2-3 groups of 5-10 individuals)

Our preference is for groups to be composed of individuals that speak the same language so that discussion can take place fluidly and to have a facilitator for each group that can speak the appropriate language.

Our objective in this first part of this small group exercise is to identify opportunities and barriers to improving the value of external early warning systems for communities.

The first set of activities are all focused on early warning systems. Please work with your group to do a mapping exercise of communication channels and sources and identify key gaps and proposals about how to address them. We particularly need to identify ways of supporting more inclusive reach to children and marginalised groups. Please map formal and informal systems separately and the information given out through each. Another key area is around local knowledge and the role it can play in strengthening the localisation, trust and uptake of ‹formal› forecasting.

Where do you get information about weather and climate from? What are the sources of information and how is it shared in the community?

Which sources of information do people most trust and act on, and why?

Are you satisfied with the current early warning systems in place? What can be improved?

What tools or technologies do you think could improve early warning accuracy and accessibility?

Are there local indicators or traditional knowledge that could be incorporated into early warning systems?

How well do you think early warning messages reach vulnerable groups (e.g., women, children, elderly, or persons with disabilities)? Are there particular groups in the community who are not so involved in preparedness planning? Are there ways that they could be better involved?

What other information do you wish EW proved and why?

Our objective in this second small group exercise is to identify how communities currently respond to shock forecasts (internal or external) and ways in which UN, government, and humanitarian organizations could better support their preparedness.

This set of activities are focused on potential and actual responses to EW. We can call this preparedness. We want to know how individuals and communities respond (if at all) to information that a drought/flood is coming. Since droughts are slow-onset and prolonged, this also includes activities in anticipation of a drought becoming worse.

What do you do when you expect a weather crisis (flood or drought)? How do you do it? Who is involved?

What is the role of civil society and local committees in supporting your preparedness and responses?

What are the barriers to responding to expected weather crisis and what needs to be done to overcome those barriers?

How could EW/EA better engage and address specific impacts for children and other vulnerable groups?

What type of support did you wish that organizations had implemented as AA?

Plenary: Groups present back on their discussions

Plenary: Prioritization of existing opportunities for more effective and inclusive EW/EA, challenges to taking advantage of those opportunities, and what needs to be overcome to address them?

Plenary: Closing by summarizing the priorities and thanking the participants.



**Mahad45, his wife
Fadumo 35 and their
daughter Samira 7
standing in front of
their home**

**Image Credit: Save
the children**