Jamalpur, Bangladesh, June 2020 © Bangladesh Red Crescent Society

Anticipatory cash assistance: an overview of emerging insights, challenges and opportunities for innovation

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CashHub

British Red Cross

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Cover photo. Bangladesh Red Crescent Society (BDRCS) teams providing anticipatory cash grants to those affected based on a flood forecast. In Jamalpur, more than 4,300 people received cash assistance ahead of the floods. The Global Flood Awareness System (GLOFAS) had issued a flood forecast with a more than 50 per cent probability of a severe 1-in-10-year flood submerging some areas of Bangladesh for at least three days and threatening 4.1 million people. BDRCS implemented early actions including anticipatory cash assistance with forecast-based funds from IFRC to protect the lives, property and livelihoods of more than 16,500 people most at risk in the districts of Kurigram, Gaibandha and Jamalpur.

Purpose of Report

This report:

- Summarises the key findings and insights gathered through a short period of research, designed to inform an innovation project brief, which focused on leveraging cash assistance in anticipatory action to enable communities to better prepare for and be less impacted by disasters.

- Identifies and unpacks some of the main challenges and opportunities within anticipatory action, and specifically in terms of utilising anticipatory cash assistance; and uses a data, technology and information management (IM) lens to suggest areas of potential innovation.

- Seeks to offer practitioners across the sector a springboard for further innovation and development in support of better and more impactful anticipatory action which is increasingly delivered using cash assistance.

Executive summary

In October 2022 cyclone Julia formed as tropical wave over the southern Caribbean sea, before rapidly strengthening to a category 1 hurricane and making landfall on the east coast of Nicaragua. It brought heavy rains to much of Central America, causing life-threatening flash floods and deadly mudslides and exacerbating an already devastating rainy season. Red Cross teams, including this one in Guatemala, implemented early action responses, monitored damages and needs, and provided assistance to people affected by the intense floods and landslides.

As climate change intensifies, the compounding impacts of climate emergencies, conflicts, economic factors and infectious disease outbreaks are pushing the humanitarian sector to its limits[1]. In humanitarian response, over the last decade cash assistance has been increasingly recognised and utilised for its transformative benefits in helping to meet ever-growing needs in a flexible, empowering and efficient way. For several years there has also been a growing recognition of the relevance and untapped potential of anticipatory action, acting ahead of a predicted hazard to prevent or reduce acute suffering and impacts on lives and livelihoods. Humanitarian agencies are establishing anticipatory action frameworks as an additional transformative tool, which capitalises on the opportunities presented by advances in technology, and are increasingly selecting cash assistance as a preferred anticipatory action where feasible and appropriate.

There is exciting evidence emerging which demonstrates the potential impact of anticipatory cash assistance in forecastable shock contexts globally. The work that led to this report was initiated to consider opportunities to contribute to this.

Through a mixed method research cycle, a series of factors are identified which influence the scaling of anticipatory cash assistance across the sector. While this report touches on the context of these challenges, its primary focus is on exploring the following six key problem areas that were most emphasised through the research and where there are opportunities to make progress through collaborative innovation.

Overview of critical problem areas:

1. THE ROLE OF GOVERNMENT:

Though governments are best placed to overcome many of the challenges faced in anticipatory action, their ability to do so in practice varies widely. This has at times resulted in an increased technical burden on the humanitarian sector and delays in activating early action protocols (EAPs) within the window of opportunity, ultimately leading to preventable blockers to effective and impactful anticipatory action programmes.

2. COORDINATION CHALLENGES:

The number of partners involved or interested in anticipatory action is growing. While this brings many benefits, it has also contributed to a vast volume of activity in and literature on the space. This can be challenging to navigate for those beginning to initiate anticipatory action programmes, increasing the time it takes to develop EAPs and hindering effective coordination.

3. TIMELY PAYMENTS:

Achieving timely payments to people at risk of a shock is the biggest pressure point in ensuring effective anticipatory cash assistance, especially in advance of a sudden onset disaster, given the small window of opportunity between the time of the first warning and when the disaster hits.

4. DATA UTILISATION:

Across the sector a major challenge in the uptake and scaling of anticipatory cash assistance is the requirement for effective use of different types of data for a range of purposes. There are three key themes in this: complex and developing recipient targeting and registration processes; accurate and holistic forecasting; and effective impact measurement.

5. CAPABILITY BUILDING:

The development and implementation of successful anticipatory cash assistance requires major shifts in ways of working and significant new capabilities. This is particularly important in this context to enable timely decision-making and activation, otherwise risking destabilising an organisation's ability to deploy EAPs and deliver timely anticipatory cash assistance.

6. TRIGGER SUITABILITY:

Trigger process suitability is a point of tension in the sector. There is frustration in some quarters that triggers are either set too high, or are too rigid, to activate when needed, while others reiterate that anticipatory action is not designed to provide cover for all shock contexts and see the trigger setting process as well governed.

This report concludes that there are multiple avenues to advance these problem areas and suggests that from across the six identified above, the focus of collaborative, digitally enabled innovation initiatives would be best suited to the challenges related to data utilisation and timely payments.

[1] UN Global Humanitarian Overview 2024

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Thank you also to the experts across the sector who openly gave us their time and provided such useful insight – including representatives from the CALP Network, Catholic Relief Service, Give Directly, World Food Programme and World Vision International.

Acronyms

AA	Anticipatory Action
AI	Artificial Intelligence
BRC	British Red Cross
CVA	Cash and Voucher Assistance
DM	Disaster Management
DREF	Disaster Response Emergency Fund
EAP	Early Action Protocol
FSP	Financial Service Provider
GIS	Geographic Information System
IFRC	International Federation of Red Cross and Red Crescent Societies
IM	Information Management
M&E	Monitoring and Evaluation
NS	National Society
RCRC	Red Cross Red Crescent
SME	Subject Matter Expert

Introduction

In this project we set out to explore options for applying and scaling uses of data and technology to enable communities to better prepare for and be less impacted by disasters by leveraging cash assistance in anticipatory action. This topic is becoming increasingly important as the climate changes, resulting in more frequent and intense disasters, with compounding effects. It also recognises the benefits of shifting from reacting to hazards to acting ahead of them, and the opportunities that may be opened up by advancing uses of data and technology-based solutions to develop and scale this approach.

The Hellenic Red Cross initiated its Early Action Protocol for extreme heat following forecasts of high temperatures across Greece. The protocol aims to assist around 2,000 vulnerable individuals, including the homeless and elderly, through anticipatory measures. These measures include distributing water, isotonic drinks, food, and sunscreen, conducting wellness checks via bike-based first aid teams, and engaging with the community for feedback.

The purpose of this project was to identify digitally enabled opportunities to increase the potential impact and scale of cash assistance in anticipatory action, with scope to develop these solutions using Design Thinking[2] methodologies. This is given the many and varied use cases of data, technology and information management (IM) across both anticipatory action and in humanitarian cash assistance, and the implications this continues to have for driving improvement in the humanitarian sector. This lens considers all aspects of data, technology and IM in the context of anticipatory cash assistance including managing data across the lifecycle of an intervention and to facilitate evidence-based decisions.

Firstly, we set out to understand whether data and technology can enable more impactful and scalable anticipatory cash assistance and if so, how? In this, we pursued four areas of inquiry:

- What has been learned in efforts to deploy cash assistance in anticipatory action to date?
- What is working well to create improved outcomes for affected communities?
- What are the key blockers and challenges which prevent progress?
- What are the problems for both affected people and implementing organisations that need solving to enable greaterscaling of anticipatory cash assistance?

[2] A human-centred, iterative approach to innovation that enables organisations to understand users, challenge assumptions, accurately define problems and develop innovative solutions. See Methodology section below for further information.

Within this report, we will present an initial assessment of some of the main challenges and opportunities in leveraging cash assistance in anticipatory action, and how innovation in these areas could add value for practitioners across the sector through a data, technology and IM lens. When looking at opportunities for innovation, we must ensure new forms of anticipatory cash assistance are suitable for the people we serve, use the most appropriate technology, and address risks across all stages, from preparedness to delivery and evaluation.

The purpose of this report is to present an initial enquiry into this growing space, with the aim that experts across the sector can use this as a springboard for innovation and collaboration in seeking to enable communities to better prepare for and be less impacted by disasters. The report findings are drawn from a combination of desk-based research and expert interviews with key informants within the International Red Cross and Red Crescent (RCRC) Movement and across the wider sector, and innovation methodologies were applied throughout, from research design to synthesis of findings. The report begins by contextualising the focus on anticipatory cash assistance and provides more insight into the methodologies applied in this project. The identified key problem areas are then introduced, and a recommended framework through which to consider these problems is proposed.

Background

Challenges and opportunities for innovation in cash assistance

The initial focus of this project was to analyse the current and emerging landscape of humanitarian cash assistance in general and explore opportunities to identify and test solutions to relevant data, technology and IM-related challenges.

This initial landscape analysis highlighted a variety of complex and inter-connected challenges that can impact the effectiveness of cash assistance, as well as areas where new and emerging technologies can play a vital role in enabling better, more effective humanitarian responses at greater scale.[3]

A summary of the main challenges found from this landscape analysis is as follows, with further detail on each finding in the appendix.Poor internet connectivity can restrict the use of digital cash transfers, as well as the timely transmission of vital crisis-related information, including for planning and implementing provision of assistance.

[3] 'From digital promise to frontline practice: new and emerging technologies in humanitarian action', UN OCHA, April 2021

Challenges in cash assistance:

1. Poor internet connectivity can restrict the use of digital cash transfers, as well as the timely transmission of vital crisis-related information, including for planning and implementing provision of assistance.

2. Low financial and digital literacy can lead to difficulty in accessing, understanding and using digital devices and technologies associated with the administration of a cash assistance programme, and can also heighten the digital divide amongst affected populations, exacerbating existing inequalities.

3. A lack of access to formal banking systems, including for people who are unbanked, can restrict options for how to provide cash assistance to recipients, and in the worst case risks the exclusion of the most vulnerable.

4. More can be done to ensure fast and accurate local targeting of locations and populations in an emergency response, especially for areas with high mobility including conflict zones.

5. Accurate targeting that relies on access to up-to-date registries is often challenging and can result in duplication or omission of recipients, meaning individuals may not receive the assistance they need and risks a loss of trust in the aid system amongst both donors and recipients.

6. Responsible data management is complex and challenging, for example navigating data ethics, data privacy, data sharing, and data control.

7. Ongoing challenges in taking cash assistance programmes genuinely to scale – including a lack of funding to transition pilots into regular programmes, the complexity of assisting larger populations with diverse needs by programming at scale, and institutional resistance to changes which can enable scaling cash assistance.

8. Fragmented coordination and collaboration between different actors in cash assistance can lead to inadequate identification and targeting of recipients, competition over resources, duplication of activities and delayed response times.

9. The need for further development of early action programmes, considering the promising potential of anticipatory action pilots, frameworks and activations.

Why the further focus on anticipatory action:

Through the landscape analysis the focus area of anticipatory action (challenge area #9 above) was prioritised as the innovation brief to be taken forward for further exploration. This was informed by the increasing scale and impact of climate disasters and their often devastating impacts, the gathering momentum for anticipatory action to support people ahead of a forecastable hazard by reducing suffering and impacts on lives and livelihoods, and the fact that cash and voucher assistance is the most widely used type of anticipatory action.[4] With the foundational cash assistance preparedness processes in place, cash can be used for early and anticipatory action, to deliver assistance across response and recovery, to connect with social protection systems, and in support of resilience building.[5]

Anticipatory action has the potential to stimulate major transformations in humanitarian response. Even in some cases in rapid-onset disasters where anticipatory cash assistance could not reach recipients before a disaster strikes, it can still be faster than post-shock cash assistance due to having been planned and initially activated in advance.[6] However, to develop effective triggers that meet the timing and intervention needs of a disaster, investment, time, data, and expertise – both local and global – are needed.

Informed by the above, the aim of this next phase of research was to conduct a deep dive into anticipatory action, with a focus on anticipatory cash assistance. The intention was to consider this area through a data and technology lens and to use the existing research and emerging insights from pilots to understand the current state and unmet needs, as well as the blockers and opportunities to better target, deliver and take to scale innovative and effective anticipatory action.

Through information management and monitoring systems, at-risk communities and disaster responders receive actionable risk information on multiple hazards and combined threats along with risks of displacement. These include community early warning systems, such as this rain gauge verification system implemented by the Red Cross of Chad with support from the French Red Cross.

[4] Anticipatory Action in 2023: A Global Overview, Anticipation Hub, 2024

[5] Movement Cash and Voucher Assistance Strategic Framework 2030, Cash Hub, 2023

[6] The future of Anticipatory Action: Four challenges to reaching scale and sustainability, Centre for Disaster Protection

Methodology

The initial purpose of this project was to understand and then design and test solutions to challenges in the scaling of anticipatory cash assistance for forecastable shocks. To do so, this project followed the innovation (or design thinking[7]) process. This is a discipline which is highly user-centred, collaborative, and iterative, which prioritises challenging pre-conceived ideas. In taking this approach, we start by understanding what the right problem is to solve, before considering how to solve it.

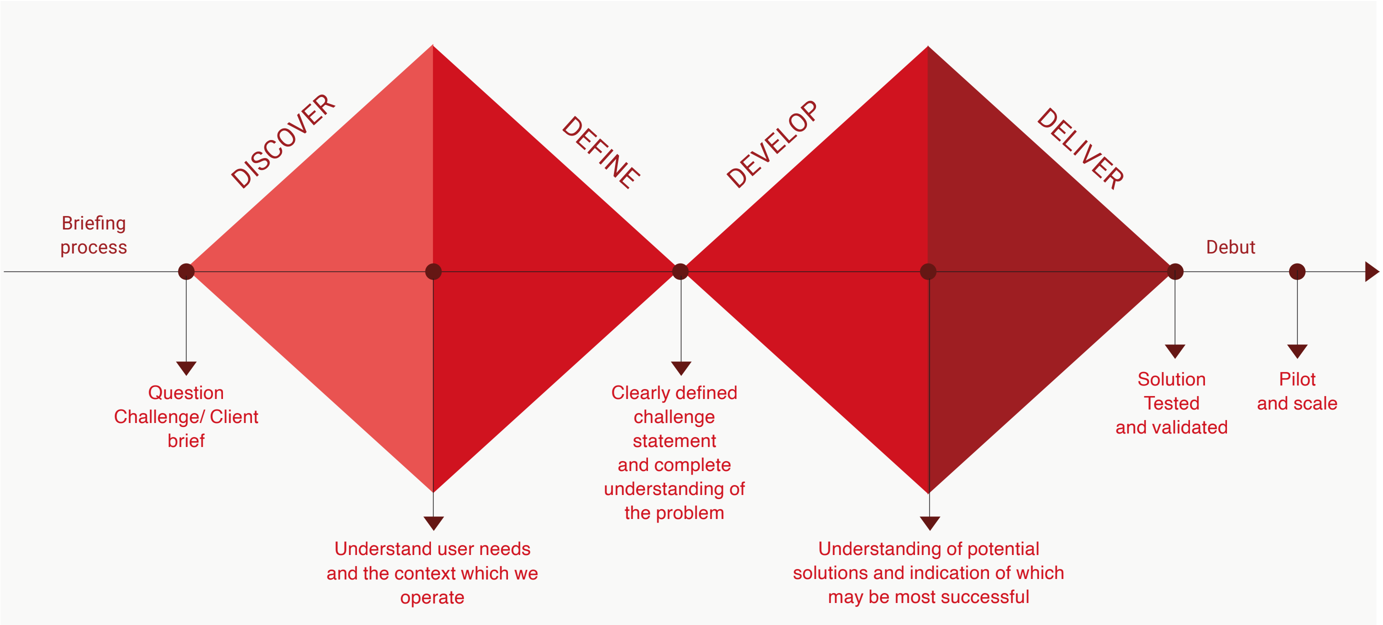

Figure 1: High-level diagram of the 'double diamond' design thinking process

We start this process with a broad opportunity area, which in this instance was anticipatory cash assistance, and typically end with a tested and scaled solution to a critical challenge identified throughout the process. However, this project ended up following a different course, pausing at the end of the Discovery phase. This was to enable the sharing of consolidated findings, and understanding of the problems to solve, with the wider sector; acknowledging both their complexity, and that other actors would likely be better placed and more able to take the needed next steps to develop solutions to a specific problem area and the challenges related to it.

In line with the above, the research methodology that informed this report was not a comprehensive academic process. We designed our research to fulfil the requirements of the design thinking process. This means we did not set out to engage with all the available literature, or with all subject matter experts (SMEs) across the sector, nor did we cover the full breadth of organisations involved in the development of anticipatory cash assistance.

We used a combined approach of desk-based research – to understand key themes and context – and in-depth interviews with SMEs – to gain more detailed insight on specific areas. Literature included in the review was prioritised based on relevance to the project's focus area of digitally enabled anticipatory cash assistance and by recency of publication. Synthesis of key themes from the literature study informed the selection of participants for in-depth expert interviews, as we targeted organisations who could shed light on specific insight gaps or provide missing perspectives following the literature review.

Desk-based research was conducted from February to May 2024, and expert interviews with 16 key informants were hosted throughout May and June 2024. This report does not consider any publications or developments beyond this date.

[7] More information on this methodology, which created the structures around this research, can be found through: https://ssir.org/articles/entry/design_thinking_for_social_innovation

Findings

Through the analysis of the research, key learnings have been defined and organised into the two following categories:

1. Wider findings on anticipatory cash assistance – the overarching themes that capture the status quo of the development and implementation of anticipatory cash assistance.

2. Problem areas impacting the scale of anticipatory cash assistance – framed as actionable problems to solve and separated from the broader analysis of the state of anticipatory cash assistance. The report's recommendations are drawn from this list of problem areas.

1. Wider findings on anticipatory cash assistance

This research has built up a picture of the operating context for anticipatory cash assistance within the sector. Generally, the findings within this research align with the growing consensus in the sector on the role that cash assistance can play in anticipatory action and the factors that influence this. These overview findings are summarised here to provide useful context for the following sections' discussion of the most critical problem areas in which progress can help unlock higher impact anticipatory cash assistance.

In this discussion we are using a sample of quotes shared by SMEs throughout our research to illustrate the themes identified, but not including the full list of supporting evidence. These quotes are cited where appropriate, and otherwise anonymised, depending on the preference of the experts involved.

Why is anticipatory cash assistance an area of interest?

A key theme explored in our interviews was the role that cash assistance plays in anticipatory action. There was variation in the level of utilisation of anticipatory cash assistance per agency, depending on the existing capacity and experience in humanitarian cash assistance and in implementing anticipatory actions. Fundamentally, all respondents spoke to the potential of cash assistance as an empowering, quick and impactful early action in many hazards and contexts.

> “*Really acting ahead, it makes sense. We are saving money in response, but we are also reaching people that are at risk before they become impacted through this crisis.*”

> “*As long as it's viable, as long as markets are functioning and as long as community preferences and other preconditions exist, cash is the right tool to use in that period.*”

Anticipatory cash assistance is a very topical area –
"We are in the right place at the right time to talk about this."

- Anticipatory action has been developing in an increasingly systematised manner for the past decade. The concepts of early action and early warnings are certainly not new, but the formalisation and institutionalisation of the anticipatory action approach and process is still in relative infancy.[8]

> *While we've been in the space within the Movement for over a decade, we've still not got it right ... it's still a journey*

- This is primarily seen to be a result of four key drivers:

1. IMPACT	– as early action can reduce and prevent suffering, *"[it] will substantially reduce the impact of disasters"*.
2. COST SAVING	– as responding early can reduce operational costs to enable greater scale: *"In an era of poly-crisis and dwindling resources, you have to be able to do more with less"*.
3. TECHNICAL FEASIBILITY	– as there now exists the capabilities to forecast, with reasonable accuracy and lead times, the likely impact of various climate shocks can be mitigated: *"On the forecasting side, there are additional innovation technological advances that we can increasingly tap into."*
4. LOCAL DEMAND	– the increasing intensity and frequency of climate shocks is pushing the development of anticipatory action plans: *"[anticipatory action is progressing] mainly because of the increase in magnitude but also frequency of the climate disasters."*

There is a need for more evidence demonstrating the impact of anticipatory cash assistance.

- The prevailing sense is that as readiness is growing, and at-risk communities in more locations are covered by Early Action Protocols (EAPs) for a wider range of sudden and slow onset shocks, the needed and still relatively nascent evidence base will also continue to grow.

> *You will have more of a variety and probably more usable evidence for cementing the argument for anticipatory action.*

[8] For further context, see this IFRC overview video on anticipatory action setting out the purpose of anticipatory action and the three pillars that it needs to work: pre-agreed thresholds, pre-agreed activities and pre-agreed financing.

- Bangladesh is the country where the most anticipatory action plans have been activated to date[9], and the Government is heavily involved in the development of these mechanisms due to the vulnerability of much of Bangladesh to flooding. The case studies from Bangladesh are widely seen as the strongest and most comprehensive existing evidence on the impact of a multi-partner enabled and to-scale anticipatory action programme, often leveraging cash assistance as an early action.[10]

- Several key informants stressed the need for stronger evidence from more varied sources, and for more varied audiences, to enable anticipatory action to progress in breadth and depth, underlining the preponderance of studies produced by the RCRC Movement and certain UN agencies.

- Several key topics are considered the priority research areas in the sector – including the cost-effectiveness of anticipatory cash assistance, and the appropriate balance of cash with a range of other possible early actions:

> *Cash is one of the many available actions…often selected in combination with one or more complementary actions, depending on what is best for the scenario in question.*

- One factor that is regularly identified as influencing the strength of the collective evidence base relates to monitoring and evaluation (M&E) practices and methodological challenges in their application in anticipatory action. For example, in the development of anticipatory action there can be ethical challenges with selecting recipient households and baselining the impact against affected people who did not receive support, and technical challenges with quantifying the impact of preventing suffering. Respondents saw opportunities for improvement here, particularly in shifting towards less manual processes.

- Despite the gaps in evidence, there is a strong sense that we know enough as a sector to be developing and strengthening anticipatory action, and anticipatory cash assistance more specifically, through strategic prioritisation and in line with existing commitments and investments.

Cash assistance is the most popular action in anticipatory action plans

- Where feasible, it is widely understood that the reasons for choosing to select and provide cash assistance in a post-shock context also apply to using cash as an anticipatory action.

- Anticipatory cash assistance is already a part of the Movement's approach to anticipatory action. In 2023 cash and voucher assistance was the most widely used type of action, with National Societies frequently selecting it in their frameworks and implementing during activations.[11]

[9] Anticipatory action in Bangladesh, Anticipation Hub

[10] For more context on the successes in implementing anticipatory action in Bangladesh, with a focus on the 2020 monsoon season examples, see this paper on the power of cross-organisation collaboration

[11] Source: Anticipatory Action in 2023: A Global Overview, Anticipation Hub, 2024

Vietnam, September 2021 © Phan Tan Lam/IFRC

A resident of Gio My Commune, Gio Linh district, Quang Tri province. Her family depends on raising poultry and cattle, as well as farming. They live in a low-lying area which was affected by the severe flooding which occurred in 2020. The Vietnam Red Cross Society supported her with a cash grant which she used to buy feed for her poultry.

- Those with established capabilities in cash assistance are in an advantageous position, as they can leverage existing capacity and experience when looking to establish anticipatory cash assistance, as there are many commonalities and transferable processes. It is clear there are new complexities which must be overcome to successfully implement anticipatory cash assistance, particularly regarding delivery mechanisms that are fit for purpose under the specific requirements of anticipatory cash assistance and in terms of ensuring timeliness. Yet most organisations reported that the technical requirements to successfully set the trigger thresholds needed to enable anticipatory actions was a steeper learning curve than adjusting their existing response-oriented cash assistance to enable the use of cash as an early action. Existing investments in cash preparedness were seen to be highly relevant to enabling cash-based anticipatory action.

- As articulated at the regional and global coordination level, both within and outside of the Movement, there is a demand for further and more nuanced learning and development regarding the specifics of utilising cash assistance as an anticipatory action and how best to leverage learning from post-shock uses of cash assistance in humanitarian response.

There is a perceived value in exploring anticipatory action, including anticipatory cash assistance, through a data and technology lens.

- Respondents confirmed the centrality of data, technology and IM in their programming. This is seen as having been critical in enabling the current scale of anticipatory action, in particular via developments in the accuracy, availability and utilisation of forecasting data.

- This also presents a series of challenges, particularly in the capability-building space. We found that for many, particularly smaller organisations, the level of the technical requirements to design and deliver anticipatory action is a major barrier which reduces their ability to implement or take to scale these programmes, and also affects confidence in considering anticipatory action as an option at the outset.

- The enabling power of emerging technologies for improving anticipatory cash assistance was clearly an area for optimism; many partners are already seeing benefits, for example through the use of geographic information system (GIS) technology in targeting.[12] It was widely accepted that these technologies are evolving and there is significant scope to add value by utilising them alongside more traditional applications in support of data gathering, monitoring and evaluation, and in the complex analysis required to set and review trigger thresholds.

- Some respondents also underscored the emerging possibilities offered by artificial intelligence (AI), and how current limitations and concerns could potentially be resolved or even totally changed by AI developments.

2. Problem areas impacting the scale of anticipatory cash assistance

Through analysis of the insights shared by key expert informants and gathered during desk research, a list of problem areas which strongly influence organisations' ability to design and deliver effective anticipatory cash assistance at scale was identified. These are based on the most frequent themes identified in our research, and areas of greatest priority in the sector.

This is by no means an exhaustive list nor able to capture the full breadth or nuance of the challenges that organisations face when developing, implementing, and seeking to scale up anticipatory cash assistance. There were two main themes that have been excluded as individual problem areas from this shortlist due to their lower relevance within the Movement and/or the incremental nature of the progress needed: 1. structures to enable flexible funding and the pre-positioning of funds locally to enable timely action; 2. the vast complexity of the network of actors and stakeholders that need alignment and management to facilitate anticipatory action from initiation through to M&E. Both are significant factors in the success of anticipatory cash assistance but – in line with the methodology for this report and initial brief for the research – are considered outside of the scope of this project's shortlisting of problems to solve through an innovation approach. These themes are instead referenced throughout the shortlisted problems where relevant.

The discussion of each problem area primarily consists of a summary of key learnings, illustrated where relevant by a sample of subject matter expert testimony to represent the range of attitudes and experiences shared in the research. A recommended approach to achieve progress against these problem areas follows in a subsequent section of the report.

[12] A geographic information system (GIS) consists of integrated computer hardware and software that captures, stores, manages, analyses, edits, outputs and visualises geographic data. In humanitarian response, GIS-based 'location intelligence' can help address key challenges including understanding where the needs of affected people are greatest, what routes are safe for delivery and access to relief services, and who to prioritise for support.

1. The role of government

Though governments are best placed to overcome many of the challenges faced in anticipatory action, their ability to do so in practice varies widely. This has at times resulted in an increased technical burden on the humanitarian sector and delays in activating early action protocols (EAPs) within the window of opportunity, ultimately leading to preventable blockers to effective and impactful anticipatory action programmes.

Key learnings:

- Governments are best placed to assist in overcoming many of the challenges humanitarian organisations face in anticipatory action, including access to historical data to support setting thresholds, maintaining and sharing social registries of socio-economic vulnerability, responsibility for meteorological societies for monitoring and activation, control over messaging systems, and responsibility for disaster management.

> Sector expert: "What we're learning is anticipatory action can only work if you are integrated to the national system. It cannot work through one organisation working alone.

- There is wide variation in governments' current contributions to anticipatory action. In some contexts, there is a lack of data gathering and management capability in government, meaning registries are more flawed and exclusionary than alternatives built through collaborating with affected communities to validate approaches for targeting and inclusion of recipients of anticipatory cash assistance.
- This can increase the technical burden on the humanitarian sector, as extensive analysis to triangulate meteorological data with other inputs such as vulnerability data to inform impact calculations is not always completed by local or national government agencies. Overlaying risk data is seen as essential but remains a challenging area due to resource and time-related costs; this was identified as one area where applications of AI might be able to achieve improvements.
- Governments are essential stakeholders and have a key role to play in the design and delivery phases of anticipatory action, but examples were cited in which state actors caused delays or even prevented timely early action within the required window of opportunity due to their inability to fulfil, or lack of awareness of, their role at the activation stage.
- An additional challenge relates to the potentially dynamic and fluid nature of fragile contexts, where changes in governments or turnover in key ministries or departments can act as a further blocker to predictable and timely anticipatory action – for example resulting in government early warning systems providing warnings too late.
- As we move forwards, the role of government is expected to become more critical as the vision for anticipatory action at scale is one that integrates best practice from the humanitarian sector into state disaster risk management infrastructure. Experts across the sector seem to share a long-term vision for anticipatory cash assistance where these approaches are embedded by governments into shock-responsive social protection systems at a national level. This goal state is becoming a consideration for how anticipatory cash assistance is being designed, tested and evaluated in the humanitarian sector.

Somalia, March 2025 © Timothy Maina/IFRC

In March 2025, the Somali Red Crescent Society (SRCS) launched its Early Action Protocol (EAP) to address drought in the Togdheer, Sool, Bari, and Mudug regions. In these areas the devastating effects of unpredictable climate and failed rains have led to severe water shortages and threatened local people's way of life, which includes rearing goats and livestock to survive. The EAP provides critical support including anticipatory cash transfers, water facility rehabilitation, and early warning messages.

2. Coordination challenges

The number of partners involved or interested in anticipatory action is growing. While this brings many benefits, it has also contributed to a vast volume of activity in and literature on the space. This can be challenging to navigate for those beginning to initiate anticipatory action programmes, increasing the time it takes to develop EAPs and hindering effective coordination.

Key learnings:

- There is a very large volume of academic contributions in the sector and a high number of stakeholders and partners involved, with the result that actors entering the anticipatory action space are often struggling to identify where to start, impacting their ability to develop strategic anticipatory action informed by best practice.
- Even the anticipatory action focal points across the Movement find it challenging to have a clear sense of all programmes in place or under development.
- There is a recognition across the sector that we need to increase visibility of the initiatives taking place to progress anticipatory action (and anticipatory cash assistance within this), but, as anticipatory action is a constantly growing and evolving field, this would require a high time commitment and is therefore seen as a capacity drain.
- Whilst there is increasing collaboration, it is widely accepted that there is high duplication and inefficiency in the progression of anticipatory action within the humanitarian system, in particular due to a lack of visibility of the current programmes in development, and as a result of ongoing issues of inefficiency in coordination between agencies within a particular response or operating context.
- This has consequences for engagement in opportunities for funding, learning, partnership and delivery.

3. Timely payments

Achieving timely payments to people at risk of a shock is the biggest pressure point in delivering effective anticipatory cash assistance, especially in advance of a sudden onset disaster, given the small window of opportunity between the time of the first warning and when the disaster hits.

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In anticipation of the 'dzud', a severe winter weather phenomenon characterised by extreme cold, deep snow and strong winds, the Mongolian Red Cross are providing anticipatory cash assistance with support from the IFRC. This resident from Tuv province, Erdene soum has already lost a number of animals due to starvation and cold caused by the dzud. She is worried that she may lose many more and she relies on these animals for her livelihood. The cash grant she has received from the Red Cross helps her to purchase food, clothing, fodder for her livestock, and other items she prioritises. Such anticipatory action by the Mongolian Red Cross teams enable some of the most vulnerable people in Mongolia to withstand the impact of natural hazards much better than before.

Mongolia, February 2023 © Mongolian Red Cross Society and IFRC

Key learnings:

- The biggest difference between delivering anticipatory cash assistance, compared to cash assistance provided post-shock or to strengthen resilience, is the time pressure to channel funds from a donor via an agency and into the hands of local people at community level within the window of opportunity. This is particularly critical for forecastable hazards with very short lead times.
- The network of actors involved in the anticipatory action plan are critical here; the readiness work to build understanding around the purpose of anticipatory action and each party's contribution to the implementation of an action is essential in creating successful conditions for the fast flow of funds at the activation stage.
- Planning and engagement with financial service providers (FSPs) is particularly important. In many cases the FSP will have been identified and procured according to technical specifications for standard (i.e. post-shock) cash assistance, not anticipatory cash assistance. Specific requirements and plans may need to be developed and incorporated to support timely anticipatory cash assistance.
- A distinct challenge arises when contracting FSPs solely for anticipatory cash assistance, as there is a need to secure FSP agreement and buy-in to a scenario where delivery of cash assistance is not guaranteed and may not occur if trigger thresholds are not reached and EAPs are not activated.
- Beyond stakeholder engagement to align all actors on their role in the implementation of cash assistance as a tool in anticipatory action, further principles, such as blanket distribution[13] and the pre-positioning of funds with FSPs are cited as the most valuable practical enablers of timely delivery of anticipatory cash assistance.
- Prepositioning of funding should be prioritised, including by further incorporating prepositioning into anticipatory action funding mechanisms. Local implementing organisations often do not have the liquidity to bridge the gap between the activation of their early action plans and the transfer of centrally-held funds, and so they are unable to implement their early actions until funds arrive locally.

[13] Blanket distributions, and targeting challenges more broadly, are discussed in the next problem area (4).

4. Data utilisation:

Across the sector a major challenge in the uptake and scale of anticipatory cash assistance is the requirement for effective use of different types of data for a range of purposes. There are three key themes in this: complex and developing recipient targeting and registration processes; accurate and holistic forecasting; and effective impact measurement.

Key learnings:

- Issues related to the availability and usability of data manifest in a number of ways that block the effective implementation of anticipatory action plans.
- One of the most frequent opportunities for improvement for anticipatory action, including anticipatory cash assistance, is the need to enable better use of available data in order to more accurately forecast shocks and their impact.
- However, as noted in problem area #1 there isn't a level playing field in terms of data readiness internationally, with some areas experiencing extreme data scarcity, and others holding an overwhelming volume of data that is not in a usable shape.
- Alongside data to support forecasting of shocks, another major challenge relates to the availability of accurate and validated registries of socio-economic vulnerability in place prior to thresholds being met as this ultimately jeopardises the ability to deliver an impact-driven and resource-efficient programme.

> Movement expert: "The process of targeting, registration and identification can be immensely reduced if we have a social register in place which is fit for purpose and up to date. Then we don't have to undertake the process of going to target and identify people, which can save us several working days at a critical juncture in the activation process.

- It is often a requirement to complete rapid targeting and enrolment of beneficiaries as the first action when triggers are met. This can significantly jeopardise the ability to deliver early actions in the window of opportunity, particularly in the case of sudden onset shocks.
- A lack of access to a pre-identified and accurate registry with which decisions can be made on who is to be targeted and included for assistance poses a serious challenge, as in most cases the agency in question will not possess the financial capacity to adopt a blanket targeting approach (i.e. assisting all people in a given area). This can mean that whether at-risk households receive timely anticipatory cash assistance is dependent on if their area has already been pre-registered for enrolment.
- There is a growing consideration of the potential for a two-stage approach to anticipatory action activation, to create more space for these time intensive targeting and enrolment activities to take place. The concept of a readiness trigger lengthens the window of opportunity to enable organisations to begin preparatory activities which will streamline their EAP activation when full triggers are met. This approach balances the risk of acting based on less accurate forecasts further out from the event, with the risks of waiting until full triggers are met and not having sufficient time to act to support those who are most likely to be affected.

5. Capability building:

The development and implementation of successful anticipatory action requires shifts in ways of working and significant new capabilities. This is particularly important in this context to enable timely decision-making and activation, otherwise risking destabilising an organisation's ability to deploy EAPs and deliver timely anticipatory cash assistance.

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Paraguay is a country known for its heat. In the summer, temperatures can reach up to 45 degrees Celsius, but with the climate crisis, thermometers now hit previously unimaginable levels. In the last 40 years, heat waves in the country have increased threefold: this means more droughts and fires that threaten the wellbeing of local people. In September 2024, as part of the Global Climate Resilience Programme, the Paraguayan Red Cross organised the 'Early Action, Early Warning Dialogue Platform' to support the coordination of all actors in the country. Verónica is a volunteer with the Paraguayan Red Cross, and she's being trained in early action and early warnings for her branch.

Paraguay, October 2024 © Maria Victoria Langman/IFRC

Key learnings:

- There is consensus that anticipatory action needs to be institutionalised with capabilities and awareness developed across teams and functions, not just in the most involved programme team. When it comes to activation, all relevant staff must have a clear understanding of their roles and responsibilities to streamline decision-making and enable timely activation. Embedding these capabilities across an organisation not only increases programme efficiency but also ensures resilience and sustainability, including preventing a situation in which the turnover of a few staff members in key roles destabilises the organisation's ability to act early.

> Movement expert: "You could lose the Disaster Management coordinator who's been there for 10 years, then there is the risk that the expertise for a whole workstream can leave with that person…capacity strengthening cannot just be with one person, but must work with and support the whole organisation. This takes time and effort."

- Due to the infrequent nature of the extreme shocks that anticipatory action programmes focus on, these capabilities do not tend to be regularly applied and developed and so can be difficult to attain or maintain; there may also be a lack of confidence at the time of activation due to a lack of prior experience.

- Within the Movement there is a major bottleneck related to addressing the need for required capability building, as the current structures do not always have the capacity to meet the increasing demand, which is also relatively highly resource and time intensive as developing a full state of readiness can take several years.

6. Trigger suitability

Trigger process suitability is a point of tension in the sector. There is frustration in some quarters that triggers are either set too high, or are too rigid, to activate when needed, while others reiterate that anticipatory action is not designed to provide cover for all shock contexts and see the trigger setting process as well governed.

Key learnings:

- Anticipatory action, including anticipatory cash assistance, is clearly a growing area across the humanitarian sector. As anticipatory action processes, systems and tools continue to evolve, it is seen as increasingly important to continue to understand and approach anticipatory action as one part of the broader disaster risk management continuum.

- Shock forecasting data is one of the main enablers for more formalised and scaled anticipatory action. However, translating this data into agreed EAPs can generate challenges around the regularity of activation. This is seen as being driven by the core concern to set thresholds at a high level, in alignment with the underlying principle that anticipatory action is first and foremost to provide a surge mechanism for extreme events that overwhelm the coping capacity of existing emergency response plans. Subject matter experts, supported by numerous case studies, identify high and inflexible trigger thresholds as a critical factor limiting the ability of anticipatory action to sufficiently protect and support communities at risk of forecastable hazards.

> Movement expert: "It is hard to communicate and explain at national level when people just see a drought and the impacts, and they don't understand why one organisation has been able to activate a trigger for an anticipatory response while another has not… to a government and the people in that area, that is understandably not clear and this is quite a challenge."

- A number of contributors to this research shared the perception that a shock trigger not being met does not necessarily equate to the hazard in question not still having a high impact on communities. This is informed by the growing number of cases where communities have been affected by predicted shocks which were covered in principle by anticipatory action plans, but where the plan was in the end not activated due to the particular conditions in the trigger threshold not being met.

> Movement expert: "During the El Niño we could not trigger because although people are flooded, we could not use the EAP funds that are prepositioned because the trigger had not been reached as per the EAP. But the effects can be seen. We really need to look again at this. It feels like there should be a moral obligation to use resources when we have them but in some instances we cannot because a certain trigger is not reached."

A recipient of food assistance through an Early Action Protocol (EAP) in Binga District supported by the IFRC. The El Niño-induced drought severely impacted crops and livestock – the primary lifelines for these communities. With a targeted reach of 4,000 impacted households across five wards, the EAP addresses critical drought-related food insecurity. Through early action and timely proactive measures the intervention aims to cushion the affected families from hunger, safeguarding their health and livelihoods.

- On the other hand, Movement experts also stress the importance of managing expectations, and of correctly conceptualising anticipatory action as one key, but still emerging piece, of a broader disaster management ecosystem that cannot and should not be expected to provide a one-size-fits-all solution by itself. There is a feeling that some actors' expectations for anticipatory action may go beyond its intended purpose, and in this way the necessary restrictions and conditions built into anticipatory action plans can become a source of frustration.

> Movement expert: "*These [anticipatory action] tools only apply for a narrow window and under specific circumstances. You need other mechanisms in place, and not only for these extreme events.*"

- At its core this tension emerges from a collective drive to continuously improve ways to best prevent and respond to humanitarian suffering. The key question is how to continue to evolve and develop the design and delivery of anticipatory action, informed by learning from the evolving anticipatory action evidence base, as one key area of the disaster management cycle.

- In terms of practical adjustments, there is a process within the Movement's Disaster Response Emergency Fund (DREF) structure to re-assess the shock threshold and triggers during monitoring and learning on a response, and possibly reduce this for a future scenario.

- Impact forecasting is also an area that is identified as requiring more data and technology investment and improvement, to inform robust threshold setting, with opportunities for this to be more locally-led and user-centred through greater adoption of community-level approaches.

Recommendations

When we consider the relationship between the six influential problem areas, we can see that all have their roots in the preparatory stage. This is unsurprising, as we know that the groundwork for successful development, activation and monitoring for anticipatory action, and the deployment of cash assistance within this, occurs in the preparation stage. As one sector expert noted:

> *The activation is just the tip of the iceberg. What you don't see, the bigger part of the iceberg is all the work that goes into the preparation stage. There is very little visibility and attention paid to this stage, and as a result there tends to be very little support in terms of funding. But in reality, we need to secure funding for an entire process because before you can push the button and activate, everyone has to agree*

The below graphic demonstrates which stage(/s) of the anticipatory action process each problem area influences, using the imagery of an iceberg to visualise that each problem area has its root in the preparation stage.

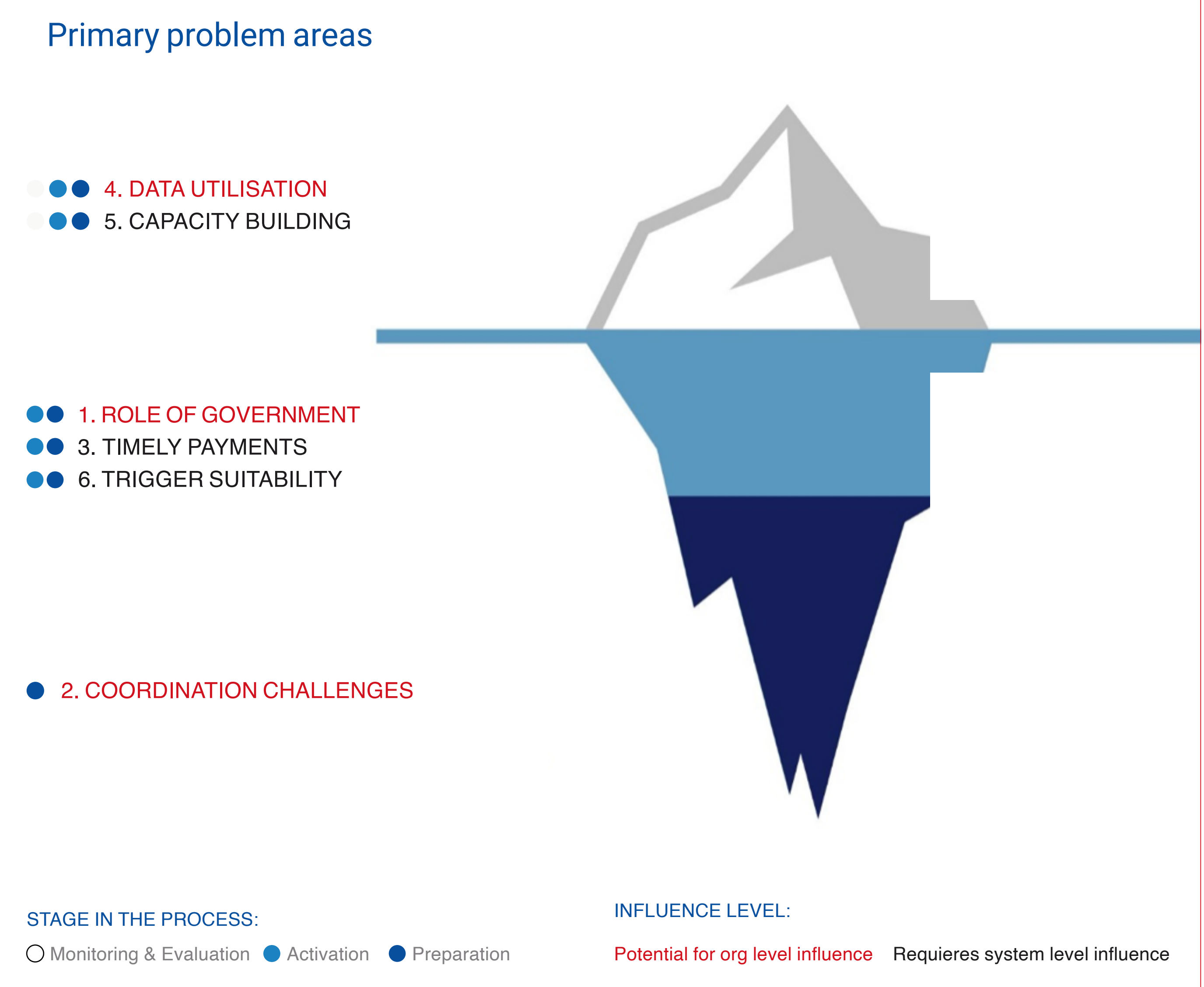

Figure 2: Visual representation of the relationships between the primary problem areas in anticipatory cash assistance and their position in the process

As such, this research supports the view that it would be most impactful to focus improvements on and investments in the preparation stage, in order to create downstream benefits in activation, and monitoring and evaluation. Beyond this, we propose considering this system of problem areas through a different framing: those with the potential for influential interventions at the organisational level; and those that require system level influence to create meaningful progress. We use this axis as a launchpad for drawing a recommended approach from this research and consider this a valuable distinction given the complexity of the anticipatory cash assistance system and the importance of approaching this in an informed way.

With recognition of the relationship between these challenges, and the level of intervention required, the following represents an initial assessment of the avenues through which each challenge could be individually progressed. We recommend considering these challenges through the below three categories:

Challenges that can best be advanced through

Advocacy and influencing

Continuous improvement work

Multi-agency collaborative projects

It is important to note that interventions to make progress in these challenge areas could come in many different shapes and sizes, and in most cases, this report concludes that a challenge could be advanced through a range of approaches. The most appropriate course will depend on the organisations involved, scale of ambition, and resources available. This assessment is included in more detail in the Appendix; what follows here is an attempt to highlight an initial assessment of the most effective approach to consider each problem area through.

Challenges that can best be advanced through advocacy and influencing

#1. The role of government: Though governments are best placed to overcome many of the challenges faced in anticipatory action, their ability to do so in practice varies widely across the globe. This has at times resulted in an increased technical burden on the humanitarian sector and delays in activating early action protocols (EAPs) within the window of opportunity, ultimately leading to preventable blockers to effective and impactful anticipatory action programmes.

Challenges that can best be advanced through continuous improvement work

#2. Coordination challenges: The number of partners involved or interested in anticipatory action is growing. While this brings many benefits, it has also contributed to a vast volume of activity in and literature on the space. This can be challenging to navigate for those beginning to initiate anticipatory action programmes, increasing the time it takes to develop EAPs and hindering effective coordination.

#5. Capability building: The development and implementation of successful anticipatory cash assistance requires major shifts in ways of working, and significant new capabilities. This is particularly important in this context to enable timely decision making and activation, otherwise risking destabilising an organisation’s ability to deploy EAPs and deliver timely anticipatory cash assistance.

#6. Trigger suitability: Trigger process suitability is a point of tension in the sector, as many experts are frustrated that triggers are either set too high, or are too rigid, to activate when needed, while others reiterate that anticipatory action is not designed to provide cover for all shock contexts and see the trigger setting process as well governed.

Challenges that can best be advanced through multi-agency collaborative projects

#3. Timely payments: Achieving timely payments to people at risk of a shock is the biggest pressure point in ensuring effective anticipatory cash assistance, especially in advance of a sudden onset disaster, given the small window of opportunity between the time of the first warning and when the disaster hits.

#4. Data utilisation: Across the sector a major challenge in the uptake and scale of anticipatory cash assistance is the requirement for effective use of many different types of data for many different purposes. There are three key themes in this: complex and developing recipient targeting and registration processes; accurate and holistic forecasting; and effective impact measurement.

Opportunities for innovation

This final grouping of problem areas ('Challenges that can best be advanced through multi-agency collaborative projects') is the space with most potential for high impact innovations, as this research has found that development of anticipatory cash assistance by nature requires multi-agency cooperation to shift the dial. Problem area #3 (timely payments) is an area of intensive exploration in the Movement and wider sector, and many best practices are emerging around solutions such as the pre-positioning of funds or to improve processes for targeting.

In the village of Sansané Haoussa the Niger Red Cross are implementing an anticipatory cash-for-work project with support from the IFRC. The village is situated between the Niger River and the road from Niamey to Tillabéry. On a site close to the village land is being restored to productivity. The land, which thirty years ago was a forest, is now no longer fertile. This is an example of the soil degradation and limited access to arable land and water which have become major drivers of acute food insecurity, affecting over 3 million people in Niger. The work carried out by people from Sansané Haoussa and other villages in the area makes the land useful again. Using spades and pickaxes they construct slightly elevated crescents of dirt that will catch the rain and let it sink into the ground, thus enabling the grass they sow to grow and turn the now arid land into green pastures for their cattle. Later on they will be able to cultivate the land and plant trees. In exchange for their work the villagers receive a weekly cash grant that enables them to buy food.

Problem area #4 (data utilisation) is a blocker that is experienced, to varying degrees, by all agencies. There are workarounds and incremental improvements being made in pockets, and a sense that different agencies are developing potentially complementary skills and solutions that could be broken down and brought together for collective benefit.

As such, we would recommend that problem area #4 is, at this time, the most critical area to be considered holistically, through an innovation lens, while making use of the many strengths and contributions that organisations of all sizes are making in this space. The further problem areas remain significant influencing factors that will continue to benefit from open discussion, knowledge sharing, and harmonisation of best practice across the sector.[14]

Drawn from our research, we identified several questions which could act as springboards for innovation in this area, and the other five key problem areas, which are included in the appendix section B. Full table: Recommended approaches.

Ultimately, the critical nature of each of the six problem areas is clearly evidenced in the literature and came through strongly in this research; the relevance and weight of each will differ depending on the context, and further exploration is needed to inform the actions required to create progress in each problem area.

[14] Further assessment of the approaches that could be taken to advance these challenges areas can be found in the Appendix. Alongside this, we've also included an initial suggestion for potential lines of enquiry to explore within each problem area. This is not intended to be an exhaustive list of questions to steer further research into each problem, and instead is simply a starter prompt to provoke further exploration, drawn from the innovation teams' research synthesis process.

Conclusion

Through the breadth of this research project, it was clear that there is strong support for further exploration of the role cash assistance can play as a key anticipatory action. This exploration is ongoing across the sector, with growing interest in anticipatory action driven by a broader acknowledgement of the growing urgency and impact of the climate emergency. A further major complicating factor relates to funding. In an increasingly stretched sector, where response requirements have reached record highs while funding has stalled[15], the allocation of finite resources is a subject of ever closer scrutiny and for many partners ringfencing resource to preposition funding for anticipatory cash assistance is not yet feasible at scale.

Within this context, we saw that there is a very energetic commitment to knowledge sharing and the development of best practice approaches. Both cash assistance and anticipatory action have driven efforts to work in fundamentally different ways and this learning journey will continue as the approaches become further entrenched, both within implementing organisations and across the networks of partners and stakeholders that are key to enabling this. There are still a limited number of scaled anticipatory action programmes that deploy timely anticipatory cash assistance. The desire for more, and stronger, evidence to learn from, and as a basis to pursue further investments, is widely felt across the sector.

In this research we found much of the experience of integrating cash assistance in anticipatory action is shared across agencies and practitioners, heightening our collective capacity for cross-sector learning. To the extent that this project was able to identify, we learned that for many organisations developing anticipatory cash assistance programmes it is not the cash assistance element that causes the most acute challenges. The learning curve appears to be steeper for anticipatory action in all it entails than it does for adapting post-shock cash readiness to the context of anticipatory action.

One tension this research identifies is around the expectations placed on anticipatory action, which influences perspectives on the potential of cash assistance as a popular early action. As discussed in problem area #6 (trigger suitability), some experts expressed frustration that the technically complex, multi-stakeholder work to align on the pillars for anticipatory action could not be activated more flexibly. Several SMEs mentioned that given the capacity for anticipatory action to mitigate the impact of shocks, the height at which trigger thresholds are often set in EAPs was a blocker to the overall impact of the approach.

The scope of this research has been to seek to establish where and why there are challenges that hinder organisations' ability to deliver anticipatory cash assistance, and how we can best utilise emerging, technologically enabled capabilities to create meaningful shifts in our collective capacity for impact. By considering ways to shift and strengthen our system for anticipatory cash assistance, we set out to contribute to broader developments such as helping enable more user-centred and locally-led approaches to anticipatory action.

This report is the result of a short but rigorous period of research, concluded in June 2024, made possible by the amazing support of our expert partners in the Cash Hub, and the contributions of all the experts engaged in this process. Overall, this report has provided a concise snapshot of the trends, opportunities and challenges that sit within the growing world of cash and voucher assistance as a tool within anticipatory action. The leads for this project are innovation practitioners rather than academic researchers so we have approached this from the point of view of what can be actionable and with the hope to catalyse new innovations to solve the evidence-backed challenges distilled above.

[15] Source: 'Falling short? Humanitarian funding and reform', Development Initiatives, October 2024
https://devinit.org/resources/falling-short-humanitarian-funding-reform/global-humanitarian-assistance-crisis-funding-response

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Appendix

This section consists of additional materials and outputs related to the innovation process and progressing through the design cycle, and as such can be read as a complement to the main report.

A. Challenges and opportunities for innovation in cash assistance

The following is a long list of the various challenges identified in relation to the design and delivery of humanitarian cash assistance from a review of the literature:

1. Internet connectivity and lack of infrastructure[16]

- Access barriers: areas with poor infrastructure or affected by conflicts might lack stable internet, hindering digital cash transfers.
- Verification issues: without consistent connectivity, real-time identity verification for aid distribution can be delayed.[17]
- Information gaps: recipients in regions without connectivity and/or internet access might miss vital information about aid availability and distribution, including access via digital platforms.
- Digital literacy and trust: areas with limited internet often have populations with low digital literacy, leading to barriers in accessing and using digital devices and networked technologies in order to participate in assistance programmes; distrust of digital devices and systems for aid can also be an obstacle to their uptake.[18]

2. Low financial and digital literacy[19]

- Complex financial products: as financial products associated with cash assistance become more complex, recipients require a deeper understanding to make the best use of these services. Without adequate financial literacy, they may not fully benefit from the financial products offered or may incur unnecessary costs.
- Digital divide: in many regions, there is a significant digital divide, with some populations having limited access to digital technology. This gap can prevent equitable access to cash assistance programmes that rely on digital platforms, thus exacerbating existing inequalities.[20]
- Financial decision-making: financial literacy is crucial for making informed decisions about saving, investing, or using cash assistance to improve one's livelihood. Lack of such skills can lead to poor financial decisions and an inability to escape the cycle of poverty.

[16] Technology Can Be Transformative for Refugees, but It Can Also Hold Them Back, ReliefWeb, July 2023

[17] Humanitarian cash and voucher assistance programmes in Ethiopia: Context analysis and capability assessment of the mobile money ecosystem, GSMA, March 2021

[18] The Digital Disparity: Why Universal Internet Access Matters, UNICEF USA, April 2020

[19] Financial Literacy: Challenges and Opportunities, Centre for Strategic and International Studies, December 2015 "Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital devices and networked technologies for participation in economic and social life." Source: Digital Literacy Primer, USAID, 2022

[20] Cash assistance: how design influences value for money, Key Aid Consulting, 2020

- Navigating financial institutions: engaging with banks and financial institutions often involves bureaucratic processes and financial jargon. Individuals with low financial literacy may find it difficult to navigate these systems to access their cash assistance.[21]
- Technological reluctance: some individuals may be reluctant to adopt new technologies due to a lack of understanding or trust. This reluctance can hinder the uptake of digital cash assistance programmes.
- Cultural barriers: in some cultures, there may be resistance to using digital financial services, especially among older or more traditional populations. This cultural barrier can limit the effectiveness of cash assistance programmes that require digital engagement.
- Literacy and education levels: general literacy levels and education are often correlated with financial and digital literacy. In areas with low literacy rates, it can be challenging to implement cash assistance programmes that assume a certain level of literacy.

3. Lack of access to formal banking systems

- Inclusivity issues: people without bank accounts, often in rural or impoverished areas, may be excluded from programmes that distribute aid through banking channels.[22] For example, in sub-Saharan Africa, a significant portion of the population is unbanked, which complicates the distribution of aid.[23]
- Increased costs: delivering cash assistance as physical cash to unbanked individuals can be more expensive due to the logistics and security considerations involved. In remote regions of countries like Afghanistan, delivering physical cash can significantly increase programme costs.[24]
- Lack of financial traceability: banking provides a record of transactions, which aids in accountability and transparency.

4. Need for fast and accurate local targeting of places and people in an emergency response

- High mobility: high levels of migration and mobility presents difficulties in identifying and reaching the target population, which can lead to delays in assistance and potential exclusion of vulnerable groups.[25]
- Security concerns: in conflict zones, security risks can hinder the accurate targeting of aid.
- Local authority and community support: a lack of support from local authorities and communities can complicate targeting efforts.
- Trust issues: vulnerable populations, often wary of aid organisations due to past experiences or misinformation, may not engage with cash assistance programmes, leading to challenges in establishing trust and ensuring aid reaches those in need.
- Data management: accurate data is crucial for targeting, yet accessing, collecting, managing and using this data in a timely manner in a crisis or following a shock can be fraught with challenges.
- Rapid changes in need: crises evolve quickly, and cash assistance programmes must adapt just as fast to remain relevant and effective.

[21] UN agency pilots financial and digital literacy app in Rwanda, Global Government Fintech, October 2021

[22] Dignifying Diverse and Desired: Cash and Vouchers as Humanitarian Assistance for Migrants, IFRC, January 2022

[23] Hiveonline, the start-up that facilitates access to microcredit for African farmers, Red Social Innovation, September 2023

[24] The Impact of Cash Transfer Programmes on Protection Outcomes in Afghanistan, UNHCR & Norwegian Refugee Council, September 2015

[25] Evaluating Cash and Voucher Assistance for Migrants on Sahel's Migration Trail, Samuel Hall, July 2023

5. Targeting processes including duplication and omission of recipients

- Resource wastage: duplication leads to a waste of limited resources, as multiple assistance is provided to the same individuals.[26]
- Inequity in aid distribution: omission of eligible beneficiaries creates inequity, as some individuals may not receive the assistance they need. An example is the post-disaster scenario where, due to outdated records, some affected families are overlooked in the aid distribution process.
- Fraud and corruption: duplication can be exploited for fraudulent purposes, with resources being diverted by those creating false identities or claims, or where lists of recipients are manipulated or falsified.
- Loss of trust: both duplication and omission can lead to a loss of trust in the aid system among donors and recipients.[27]
- Administrative burden: addressing duplication and omission issues can lead to an increased administrative burden on aid organisations, requiring more time and resources to rectify.[28]

6. Responsible data management including data ethics, data privacy, data sharing, data control[29]

- Data protection: with the increasing digitalisation of aid, protecting sensitive recipient data from breaches is paramount.
- Informed consent: ensuring that recipients understand how their data will be used is a challenge, especially in areas with low literacy rates.[30]
- Data sovereignty: recipients often have little control over their data, raising issues of data sovereignty.[31]
- Ethical use: there is a risk of data being used for purposes other than intended, such as surveillance or political manipulation.
- Data accuracy: maintaining accurate data is difficult in fluid situations, such as in the aftermath of large-scale natural disasters, leading to potential exclusion from aid.
- Interoperability: sharing data between organisations while maintaining privacy standards remains complex, and aid organisations in many contexts continue to struggle to coordinate assistance fully and optimally, including via timely and appropriate data sharing agreements.
- Regulatory compliance: adhering to various and changing data protection laws such as the EU's General Data Protection Regulation (GDPR) is a challenge for international organisations providing aid across borders.

[26] Cash Digitization: UN Collaboration, Coordination, and Harmonization Opportunities, Better than Cash Alliance, December 2018

[27] For example, in the aftermath of the Nepal earthquakes in April-May 2015, there were instances of community distrust due to perceived unfairness in aid distribution based on location, caste, and perceived political bias. Source: Aid and Recovery in Post-Earthquake Nepal, The Asia Foundation, July 2016

[28] Afghanistan: Cash and Voucher Working Group - Interagency Beneficiary Assistance Tracking Tool and De-duplication Meeting Minutes (08 March 2022), ReliefWeb

[29] Data Responsibility: Let's not wait for another wake up call, Blog, The CALP Network, May 2019

[30] An example is the Rohingya refugee crisis, where biometric data collection raised concerns over informed consent. Source: UN Shared Rohingya Data Without Informed Consent, Human Rights Watch, June 2021

[31] The case against cash, Blog, The New Humanitarian, February 2021 This was evident in the debate over the use of the Aadhaar identification system in India for aid distribution, which provides each Indian resident with a unique identification number linked to their demographic and biometric data. Source: Ethical challenges of digital health technologies: Aadhaar, India, Bulletin of the World Health Organization, 2019

7. Taking cash assistance programmes genuinely to scale[32]

- Resource constraints: pilots often have dedicated resources which may not be available when seeking to scale up.
- Complexity of scaling: successful pilots may not address the complexities of larger populations with diverse needs. The transition from a controlled pilot to varied real-world conditions can be problematic.
- Institutional resistance: There can be resistance to change within institutions, making it difficult to move from a pilot to a full programme. This has been evident in the slow uptake of mobile money for cash transfers in some humanitarian organisations.

8. Coordination and collaboration between all actors in cash assistance

- Inadequate beneficiary identification: without coordinated systems, there is a risk of missing the most vulnerable.
- Competition over resources: agencies working in silos can compete for the same local resources, driving up costs.[33]
- Delayed response times: Coordination is key to a swift response. Lack of it can lead to delays.
- Strategic alignment: a coordinated approach ensures that cash assistance aligns with broader strategic goals, but without it, there can be a misalignment of objectives.

9. The need for further development of early action programmes

- Protection against destruction is more effective than reconstruction: findings from pilots have shown that anticipatory action has the potential to be at least as cost effective, if not more, than post-shock efforts.[34]
- Expanding anticipatory action to new hazards:[35] anticipatory action has only been piloted in natural disasters, though thought experiments have been conducted in scenarios involving conflict, food insecurity and disease outbreaks.
- Prediction difficulties: Some rapid-onset hazards are harder to predict[36] – for example typhoons do not tend to be confidently predicted with more than a 72-hour lead time. Climate change is also impacting rapid intensification of shocks, making disasters more unpredictable.

[32] Too tough to scale? Challenges to scaling innovation in the humanitarian sector, ELHRA, 2018

[33] This was seen for example in Haiti following the 2010 earthquake where competition among NGOs for local resources inflated prices. Source: Coordination and cash transfer programming, The CALP Network, 2013

[34] Livelihoods cost effectiveness brief: Anticipatory cash - Nigeria 2022, International Rescue Committee, 2023

[35] Expanding anticipatory action to new hazards, Anticipation Hub, April 2023

[36] Anticipatory action and cash transfers for rapid onset hazards: Practitioners' note for field testing, Asia-Pacific Technical Working Group on Anticipatory Action and Asia-Pacific Regional Cash Working Group, 2022

B. Full table: Recommended approaches

Challenges	Challenges that can be advanced through advocacy and influencing	Challenges that can be advanced through continuous improvement	Challenges that can be advanced through multi-agency collaboration	Potential lines of enquiry to explore within this problem area
1. The role of government: Though governments are best placed to overcome many of the challenges faced in anticipatory action, their ability to do so in practice varies widely. This has at times resulted in an increased technical burden on the humanitarian sector and delays in activating early action protocols (EAPs) within the window of opportunity, ultimately leading to preventable blockers to effective and impactful anticipatory action programmes.	High suitability	Medium suitability	Lower suitability	How might we prepare for an increase in climate shocks in the near future through enhanced national data readiness?
2. Coordination challenges: The number of partners involved or interested in anticipatory action is growing. While this brings many benefits, it has also contributed to a vast volume of activity in and literature on the space. This can be challenging to navigate for those beginning to initiate anticipatory action programmes, increasing the time it takes to develop EAPs and hindering effective coordination.	Lower suitability	High suitability	Medium suitability	How might we use data and technology to develop more widespread, sustained, practical expertise to aid the implementation of anticipatory action?
3. Timely payments: Achieving timely payments to people at risk of a shock is the biggest pressure point in ensuring effective anticipatory cash assistance, especially in advance of a sudden-onset disaster, given the small window of opportunity between the time of the first warning and when the disaster hits.	Lower suitability	Medium suitability	High suitability	How might we reduce the steps required in the window of opportunity to implement payments?
4. Data utilisation: Across the sector a major challenge in the uptake and scale of anticipatory cash assistance is the requirement for effective use of different types of data a range of purposes. There are three key themes in this: complex and developing recipient targeting and registration processes; accurate and holistic forecasting; and effective impact measurement.	Medium suitability	High suitability	High suitability	How might we increase the data usability to shape and scale anticipatory action to contexts that experience data scarcity?
5. Capability building: The development and implementation of successful anticipatory cash assistance requires major shifts in ways of working and significant new capabilities. This is particularly important in this context to enable timely decision-making and activation, otherwise risking destabilising an organisation's ability to deploy EAPs and deliver timely anticipatory cash assistance.	Medium suitability	High suitability	Medium suitability	How might we use data and technology to fast-track beneficiary targeting and develop a system of pre-enrolment to enable timely anticipatory action?
6. Trigger suitability: Trigger process suitability is a point of tension in the sector. There is frustration in some quarters that triggers are either set too high, or are too rigid, to activate when needed, while others reiterate that anticipatory action is not designed to provide cover for all shock contexts and see the trigger setting process as well governed.	Medium suitability	High suitability	Lower suitability	How might we enable forecasting and trigger setting to meet emerging needs to account for an increase in compounding shocks and the impact on needs?

C. Design principles for anticipatory cash assistance

Three key design principles were developed by the research team during this project's research phase. These principles are extrapolated when undertaking an innovation project to agree a set of standards and approaches that we commit to upholding when moving into the problem-solving stage.

These design principles are a product of the synthesis of the learnings generated through the primary and secondary research activities undertaken – including desk research, literature reviews, and expert interviews – and informed by best practice already recognised in the sector.They are included here in case of use for practitioners developing new products or services to aid the scaling of anticipatory cash assistance.

We will:

1. Consistently use clear, accessible language

We learned that there are multiple challenges arising from language use in the progression of anticipatory cash assistance.

- Language use varies within the sector, which, compounded by the technical complexity of the subject matter, results in a high barrier to entry for new practitioners.
- This can also cause challenges externally, for example when actors use different, contradictory, or jargon-heavy language in their communications and engagement with communities.
- We seek to, where possible, support the growth of a common understanding of terminology in the evolving anticipatory action sector, which benefits both collaboration and harmonisation, and the way we communicate in our programmes.

2. Prioritise approaches that are locally-led and which value historical and Indigenous knowledge

Humanitarian cash assistance and anticipatory cash assistance are inherently user-centred means of delivering humanitarian support due to the autonomy, flexibility and choice cash assistance provides to recipients to meet their needs. Throughout our research we saw clearly that one way the sector is pushing towards a more user-centred approach is through the promotion of locally-led anticipatory cash assistance programmes.

- One of many benefits in the promotion of a more locally-led approach to the design of anticipatory action is the opportunity to produce stronger outcomes through the incorporation of existing community knowledge of hazards and their impact.
- We learned that this is also particularly key concerning cash as an early action, as there tend to be strong preferences concerning payment mechanism within and across different communities, and this can be at tension with an organisation's preferred approach based on factors in the operating context.
- We seek to create as much space as is feasible to bring in local knowledge early, with the intention to co-produce well informed, robust and sustainable programmes that meet communities' needs.

3. Work as openly and transparently as possible

In the evolving space of anticipatory cash assistance, it is felt that the pace of growth is far beyond the current capacity of the system to facilitate connection and harmonisation. One result of this is there isn't full sight of all the developing work and emerging opportunities taking place across the world, and this perceived lack of visibility in the sector is hampering the potential impact of anticipatory action, and the role of anticipatory cash assistance within this.

- Anticipatory action practitioners and agencies would benefit from further convening activities and cross-fertilisation to enable a more informed, tactical and joined up approach to the development of anticipatory cash assistance.
- There are opportunities to leverage and build on the many systems and forums that are already in place, within both anticipatory action and cash assistance, to work more collaboratively and openly, including to ensure more consistent knowledge sharing.
- We seek to share what we learn widely, honestly, and accessibly.

D. Innovation inspiration

Our research was strengthened by inspiration across the humanitarian and private sectors, from specific case studies in effective anticipatory cash assistance to innovative examples of crowdsourced IM or use cases of AI. The following is a snapshot of points of reference that were thought-provoking for the project team.

Sources of inspiration:

- Digital self-enrolment for Movement cash assistance using AccessRC
- Google using AI power flood forecasts for new contexts
- Citizen science in Guatemala using Indigenous collective intelligence
- Tanzania Red Cross and DRR network enabling community monitoring via existing communication channels
- Passive monitoring of public health in COVID through existing technology
- Social media data scraping to build impact data for disasters
- PartoPen: digital pen software supporting maternal health
- Crowdsourced and drone-enabled community mapping
- Teacher AI – testing uses of chatbots and AI lesson planning to support the capacity and capabilities of remote educators
- Red Cross Red Crescent climate games for humanitarian skills building
- World Health Organisation tabletop simulations supporting countries' preparedness efforts on the COVID-19 pandemic outbreak
- American Red Cross using Meta VR to enhance classroom-based lifeguard training
- Google Data Commons
- UNHCR uses of biometrics to generate validated beneficiary lists for displaced populations
- Kenyan Red Cross data collection integration into CVA payments systems working with 510 and the 121 Platform
- Netherlands Red Cross registration for CVA for groceries through school systems
- Give Directly machine learning and mobile data for remote targeting and enrolment in Togo

Islamic Republic of Iran, June 2025 © Iranian Red Crescent Society

In line with its humanitarian mandate and commitment to climate adaptation and community resilience, the Iranian Red Crescent Society (IRCS) implemented a series of educational, awareness-raising, and preventive activities across the country to mark Heat Action Day 2025, including running educational workshops and trainings with affected communities in climate-vulnerable areas.

CashHub

British Red Cross