Anticipatory Action Capacity Statement

Using Climate Information Services

Jannatul Mawa/ CARE Bangladesh

The Climate Crisis

According to the United Nations, 2011 to 2021 was the warmest decade in recorded history.[1] Experts estimate that under current climate policies, the world is headed towards a 2.7°C increase by 2100, a temperature that would have disastrous effects on people and the ecosystems we depend on.[2] Over the last two decades, climate change has led to over 7,000 disasters, affecting 4.2 billion people at the cost of $2.9 trillion.[3] Many of these disasters are due to weather and climate related events. If action is not urgently taken, the number of people in need of humanitarian assistance annually due to the climate crisis could double by 2050, meaning 200 million people will need be impacted by a cruel combination of climate-related disasters and the socioeconomic impact of climate change. Similarly, financial costs could balloon to 20 billion US dollars per year[4]. Therefore, going forward, it will be critical to invest in adaptation and anticipatory action. CARE's research shows that the benefits of adaptation, including anticipatory action, and its associated environmental, economic, and social benefits outweigh the cost of investment[5].

Importance of Anticipatory Action

Reducing the impacts of climate hazards, such as droughts, floods, or storm surges is possible through *anticipatory action* (AA). Anticipatory action involves acting prior to the onset of climate hazards, or before acute impacts are felt. By acting early, people and communities can mitigate the impact of an actual or a likely disaster, reducing human suffering and losses, strengthening resilience, preserving livelihoods, and leading to a faster and more efficient and more dignified humanitarian response. AA can be viewed as precursor or complementary to adaptation planning where anticipatory action helps people prepare for immediate, and mostly short-term needs in a crisis scenario - unlike adaptation which focuses on long term planning and resilience building years in advance. From a financial perspective, AA has proven to be a sound investment. A study from FAO (2021) in the Philippines and Sudan revealed that for every 1 USD allocated to AA, 7USD was generated for farming families in terms of avoided loss and added benefits. It is an approach that is increasingly important to successful humanitarian action and disaster risk management. Together, AA and adaptation sit within CARE's resilience framework – which sees anticipation, absorption, adaptation, and transformation as essential and complementary pillars[6].

Definitions and key components of AA

While there are different definitions of what AA is, they share common elements. They describe AA as a proactive approach consisting of interventions or actions designed to mitigate the potential impacts of a hazard or shock before it occurs or before its acute impacts are felt. For instance, OCHA defines AA as:

> *Actions taken in anticipation of a crisis, either before the shock or at least before substantial humanitarian needs have [fully] manifested themselves, which are intended to mitigate the impact of the crisis or improve the response. Anticipatory action is a proactive intervention, which takes place upon issuance of a warning or activation of a pre-agreed trigger. Effective anticipatory action requires robust forecasting and triggers/parameters linked to pre-agreed financing, along with risk monitoring and analysis, and ground truthing capabilities* (CERF, 2019).

Various actors have employed different terminology to describe initiatives, mechanisms and systems that are closely related with the AA approach or fall within the broader AA framework. These terms include anticipatory humanitarian action, forecast-based financing, forecast-based action, early action, early warning early action, and risk-informed early action. The specific term used depends on both the actor involved and the operational context in which it is applied (Tozier de la Poterie et al., 2023; de Wit, 2019; Knox Clarke, 2022).

Despite the differences in definition and terms used, the AA approach commonly share three characteristics as illustrated in Figure 1 below (IOM & FAO, 2023):

1. Risk information, forecasting and early warning systems
2. Pre-agreed funding and thresholds
3. Pre-agreed actions, planning and operations to deliver the early action

FIGURE 1: Characteristics of AA

Source: UNOCHA

Climate Information Services

A key route to AA and management of risks is through gender responsive climate information services (CIS) that is provided through early warning system (EWS) that can trigger warnings, action, and social safety nets to avoid or minimize disaster impacts or assist people in making informed decisions. In the AA process, hazard risks and potential impacts are assessed, early action plans are developed, and triggers are set for when action should be initiated. If the forecast triggers are met leading to a high probability of an event happening (such as forecasted water level in relation to flood danger levels, and number of days of continued flooding), the agreed actions and finance to implement those actions are initiated.

Countries have committed to strengthen early warning systems under the Sendai Framework for Disaster Risk Reduction, to make one billion people safer from disaster by 2025 through the Risk Informed Early Action Partnership, and to reduce the risk of extreme events through their Paris Agreement commitments. To make these commitments a reality, EWS must be available, accessible, and adapted for use in the local context, interpreting science and meteorological knowledge, combined with local knowledge into tailored advice, services or products. Examples of climate information services include vulnerability and weather monitoring linked to government early warning and emergency preparedness and response action and radio communication; adaptive social protection schemes; risk- and index-based insurance or forecast-based early warning systems.

CARE's Approach to CIS

CARE takes a holistic approach to strengthening resilience in communities exposed to shocks and stresses with anticipation as a key dimension of this. Our resilience framework sees the capacity to anticipate (and act) in the context of capacities to absorb and adapt to these shocks and stresses and to take transformative actions in the face other structural barriers to resilience.

For CARE, understanding and acting on the gendered dimensions of anticipatory capacities is central. Evidence shows that access to services and support that enable anticipation and decision-making is often related to power and privilege, which can lead to discrimination against or exclusion of marginalized groups, such as women and people with disabilities. For instance, women's access to climate services can be limited due to access to information and community technologies, such as cell phones. Across low- to middle-income countries, women are 8 percent less likely than men to own a cellphone, and 20 percent less likely to use mobile internet services. The gap is widest in South Asia, where these figures increase to 23 and 51 percent respectively.[7] Social norms that define gendered labor roles and decision making can also determine the extent to which women receive climate information[8]. Decision making spaces around anticipatory action are also often dominated by men and may not consider the specific needs of women or enable women's participation and leadership.

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CARE'S RESILIENCE FRAMEWORK

Anticipate: Foresee and therefore reduce the impact of hazards that are likely to occur and be ready for unexpected events through prevention, preparedness and planning.

Absorb shocks: Accommodate the immediate impact of shocks and stresses on lives, well-being, and livelihoods, by making changes in usual practices and behaviors using available skills and resources, and by managing adverse conditions.

Adapt to evolving conditions: Adjust habits, practices, lifestyles, and livelihood strategies to respond to changed circumstances and conditions under multiple, complex and at times evolving risks.

Transform: Influence the enabling environment and drivers of risk to create individual and systemic changes on behaviors, local governance, and decision-making structures, market economics, and policies and legislation.

Programmatic Examples of CIS for Anticipatory Action

Numerous examples of CARE projects on CIS and EWS can be found in Making decision in sunshine and rain: Learning report of CARE's climate information services programs. In these projects, CARE has contributed to conceptual thinking and development of CIS, brought local voices and experience into national systems and global advocacy, worked as an intermediary CIS organization, led on participatory multi-stakeholder processes, innovated, and implemented CIS within projects and programs, and promoted gender justice. This publication also identifies potential areas of future work that CARE could undertake on anticipatory action. Below are some highlighted projects.

"Strengthening Household Ability to Respond to Development Opportunities" (SHOUHARDO III) is a program that has been operating since 2015 in eight districts in Bangladesh. The objective of the project is to build the capacities of local Government offices in disaster risk reduction and provide farmers with CIS. Farmers were provided early warning of rainfall, temperature, and humidity via EWS such as SMS and megaphone to inform crop production and livestock management. The adoption of mobile technology had a remarkable contribution to household and community resilience as it allowed women to receive early warnings and climate advisories. Approximately 48% of people receiving early warning used this information. This was combined with other disaster risk reduction measures, such as settling climate migrants, establishing flood shelters in schools, installing brick mount protection walls against waves and long-term adaptation measures, such as floating gardens and introducing farmers to flood tolerant rice.

The **Supporting Flood Forecast-based Action and Learning (SUFAL)** project in northwest Bangladesh built the capacity of government, local disaster management committees and communities in early warning systems and generated evidence and learning to strengthen governance systems and increase financing for anticipatory action. The impact of this project is twofold. First, resilience has been strengthened because improved access to EWS has allowed the community to take early actions to save their crops, livestock, and household assets. For instance, men with mobile phones relayed early warning messages about an upcoming flood to their neighbors, especially the women who do not own mobile phones. This led families to start shifting to a highland shelter with their belongings and cattle, saving lives and protecting livelihoods. Second, with a lead time of 15 days, the impact-based flood forecasting and early warning system allowed the local government disaster management institutions to better coordinate resources at the union, upazila and district levels prior to floods occurring, thus strengthening their anticipatory capacity. A second phase of the project is focusing on institutionalizing an anticipatory action financing and delivery model within local government and exploring integration of anticipatory action within existing social protection mechanisms.


Johanna Mitscherlich/CARE

TOOLS FOR AA

CRM: The Climate Resilience Marker (CRM) is a tool that allows project teams to self-assess how well climate resilience is integrated into their project and provides a starting point for further reflection and action on taking climate resilience throughout the project cycle.

CVCA: Climate Vulnerability and Capacity Analysis (CVCA) is a proven suite of tools that help communities gather and analyze information on climate vulnerabilities and risks, assess capacities to adapt, and identify actions to increase their resilience. CVCA helps integrate gender, ecosystems, and governance into its methodology, resulting in more inclusive recommendations for climate change adaptation and resilience.

PSP: Participatory Scenario Planning (PSP), which allows users to plan for short term, anticipatory action to long term adaptation action in a participatory manner. PSP incorporates climate information to make decisions under uncertainties. This leads to producing scenarios and multiple solutions to minimize the impacts of climate change within a community.


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The **Forecast-based Early Action in Southeast Asia** (FBEA SEA) project will promote gender-responsive early action based on forecasts to help Southeast Asian countries prepare for effective disaster preparedness based on efforts undertaken in Vietnam. Activities will focus on strengthening awareness, building capacity and resilience of ethnic minority women and others to engage them in policy processes through evidence-based advocacy and learning, and operationalizing existing frameworks and guidelines into contextualized anticipatory action for flooding and drought in Quang Tri and Binh Thuan in Vietnam. This project will target a minimum of 5,272 direct at-risk and hard to reach communities, local CSOs and authorities, national and regional duty bearers, with particular emphasis on the needs and contexts of women and girls, and other traditionally excluded groups.

The **Moving Urban Poor Communities Towards Resilience** (MOVE UP 5 Philippines) project builds resilience among the urban poor communities, particularly women, persons with disabilities, and indigenous peoples, and local government units in Mindanao through adoption, consolidation, dissemination, and handover of urban resilience strategies developed under the past 4 phases of the ECHO-funded MOVE UP projects. The MOVE UP 5 project will integrate forecast-based early action and rapid response. The Action will employ its tested MOVE UP model and the related inclusive strategies of alternative temporary shelters, resilient livelihoods and shock-responsive social protection with forecast-based early action and rapid response mechanism. These interventions are designed to support seven strategically selected cities and three urbanizing municipalities where conflict and disasters cause urban displacement either within the cities, or cities receiving or sending internally displaced persons (IDPs) between the cities and municipalities.

The **Hamzari project in Niger** enabled 77% food producers who are women to use climate information and implement risk-reducing actions to improve resilience to climate change. Young people, who represent 34% of producers, used climate information and were mobilized within the community to disseminate early warning and emergency response actions. Participatory Scenario Planning workshops were held to discuss the most likely weather and climate scenarios, develop relevant and actionable advisories, and provide recommendations to prevent and/or mitigate the risks related to these scenarios. Participants ultimately developed simple and realistic disaster risk reduction (DRR) plans addressing the most common risks such as floods, more or fewer long dry spells (10 to 14 days on average), pest invasion, etc. This is a good example of how CIS, informed by a participatory process, led to practical planning and action by communities.


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Integration of PSP into Early Warning Systems in Ethiopia
Early Warning Systems often lack the functionality needed to support informed decision making and early action. Where CARE works in Ethiopia, communities were not able to get accurate, timely and relevant early warning information. To address this challenge, CARE applied the PSP approach, which facilitated a space for scientific and indigenous knowledge to be harmonized to coproduce early warning information that is downscaled to the woreda level and packaged into advisories which are relevant to farming households to make informed decisions. The PSP approach helped early warning committees at the woreda and kebele levels to understand the value of climate information and their respective roles in disseminating and advising farmers on its use. Women were able to participate in PSP forums since they were held at a time most suitable for women. This led to weather and climate advisories to consider women's needs and capacities, which led women to use the advisories. The PSP forums were also effective in disseminating advisories to women. PSP has created a platform for women especially those with indigenous skills of forecasting to come to the forefront.

An objective of the **Titukulane project in Malawi** is to increase capacity of systems, communities, and individuals to anticipate and absorb shocks and stresses. In collaboration with Zomba and Mangochi District Councils, community members, including women, traditional forecasters, meteorology experts, and other government representatives met to discuss the 2020/2021 seasonal forecast, probabilities of different scenarios, and the consequent risks and opportunities through the Participatory Scenario Planning (PSP) approach. Climate information and advisories provided during the PSP assisted farmers to make appropriate decisions on what type of farming techniques to adopt and the type of crops to plant. Automated early warning equipment for flooding in Zomba District was also installed and as a result of this collaboration, 23 communities have access to timely climate information.

Anticipatory Action Pilot in Timor-Leste
Timor-Leste is highly susceptible to the effects of climate change, with more frequent and more extreme weather events being compounded by the country's vulnerability to the effects of El Niño / La Niña Southern Oscillations, which cause heavy rainfalls and protracted drought cycles. The Anticipatory Action Pilot project in Timor-Leste is currently being designed and is set to launch in October 2023. CARE will be strengthening the capacity of Suco (sub-village) Disaster Management Committees and the National Civil Protection Authority to better respond in an anticipatory way to floods based on historic data, rainfall projections, manual gauge readings and climate vulnerability assessments of communities. Early warning communications channels will be set up and community members trained on these. Through partnering with the local Organizations of Person's with Disability (OPD), people living with a disability – along with women and children – will be identified and be recipients of relevant and appropriate non-food items (NFIs).

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Anticipatory Humanitarian Action for Food and Nutrition Security in Madagascar

This project created an Anticipatory Alert that aimed to mitigate and anticipate severe food and nutrition insecurity. The alert was was triggered in early July 2023 (two months before expected peak of food crisis) to provide support for the most vulnerable populations in the most remote villages. This led to 2,500 people to receive emergency food supply and created food-for-work programs that opened paths and small roads to allow access to villages and markets for 7,500 people. This also enabled distribution and promotion of short-cycle seeds adapted to climate change. Gender issues were also addressed to reduce women's food insecurity during the lean season.

In addition to the projects profiled above, CARE is part of networks such as the START Network to help transform the humanitarian system by providing funding through crisis anticipation funds and a disaster risk financing mechanism. It also convenes the FOREWARN network that brings together multidisciplinary specialists to support the forecasting and risk assessment needed for anticipatory action. It has a goal to decentralise and localise the network with national START Funds and Hubs in various countries which CARE operates.

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CARE's Key Value Adds to CIS

Climate informed agriculture and adaptation scenarios and decisions: CARE has developed a Participatory Scenario Planning (PSP) approach for seasonal climate forecasts, which involves accessing and interpreting scientific and local climate information in the local context together with farmers, meteorologists and agricultural experts and communicating the resulting information (forecasts and advisories under different scenarios) to a wider audience. CARE has also integrated such climate adaptation into its broader women's economic justice programs, such as adopting climate smart agricultural practices in its work to strengthen value chains and support women farmers.

1) **Accessing climate information:** Given the complexity of climate science, it is essential to link with national meteorological and hydrological services and other climate science partners to allow the best available information to be accessed, explained, and downscaled. CARE supports providing forecasts and interpreted products such as agro-met advisories and interactive maps to both male and female farmers to help them make decisions on how best to manage climate change-related impacts.

2) **Knowledge brokering, interpreting, and communicating climate information:** Scientific and meteorological climate information can be complex. Multi-stakeholder processes such as PSP for seasonal information and use of rainfall data in early warning systems enable better understanding of information – and its level of accuracy or uncertainty – and collective interpretation of this into advice that is targeted to the end user. CARE helps to understand user needs, enables their participation, and selects communication channels. CARE facilitates access to short term weather and climate information using radio, mobile phone platforms and collectives or social platforms (Farmer's Field and Business Schools, Village Savings and Loan Associations, or community-based Disaster Risk Management groups). As such, CARE can contribute to supporting meteorological services moving towards Impact-based Forecasting, one of the first key steps for AA. Impact-based forecasting involves integrating data about potential hazards with information about the exposure of populations, assets, and infrastructure, and their vulnerability to hazardous events, enabling the provision of actionable information about where and when a hazard is likely to happen, how severe it is likely to be, and what impacts it is likely to have.

3) Community based early warning and disaster risk management: Community-based early warning and disaster risk management follows a participatory and decentralized approach which leads to context-specific, and locally owned strategies for early warning, disaster preparedness and risk management. Communities at risk are actively engaged in the systematic collection of early warning data and the identification, analysis, treatment, monitoring and evaluation of disaster risks to reduce their vulnerabilities and enhance their capacities. The objective is to empower communities through the process itself, thereby building resilience. CARE facilitates the participation of community members, particularly of vulnerable groups/individuals in the assessment of early warning information needs, identification of risk management measures based on differential needs, development of community capacity to understand and interpret early warning information to take preparedness and risk management actions. CARE works extensively with government – at all levels – to ensure these community level vulnerabilities and capacities and are considered in systemic responses and system strengthening. CARE also engages in national, regional, and global policy development and reform, bringing evidence, testimony and learning to disaster risk management, humanitarian, climate change and other relevant sectoral processes and platforms.

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Endnotes

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