

## **ANTICIPATORY ACTION** IN ASIA AND THE PACIFIC

Technical Standards



## **ANTICIPATORY ACTION** IN ASIA AND THE PACIFIC

Technical Standards

#### **Required citation:**

Asia-Pacific Technical Working Group on Anticipatory Action. 2023. *Technical Standards on Anticipatory Action in Asia and the Pacific*, Bangkok.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the organizations concerning the legal or development status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether these have been patented, does not imply that these have been endorsed or recommended by the organizations in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of respective organizations.

© TWGAA, 2023

Cover photo: ©FAO

# CONTENTS

Foreword	vi	
Introduction	1	
What is Anticipatory Action?	1	
Developing Technical Standards	4	



#### Anticipatory Action building Block 1: Risk Information, Forecasting

and Early Warning Systems	7
What information and data are needed for AA?	7
What type of forecasts are appropriate?	9
Which hazards can be forecast with sufficient accuracy for AA?	10
What are triggers and thresholds?	11
What types of triggers are typically used for AA?	12
Steps to develop triggers and thresholds	13
Lessons learned on trigger and threshold selection	14
Who should be involved in trigger development?	15
What further work is needed on Building Block 1?	15

#### **Anticipatory Action Building Block 2:** Planning, Operations

and Delivery	17
What activities are appropriate for AA?	17
Using cash	19
What lessons have been learned on how to design AA well?	20
What lessons have been learned on how to implement AA well?	21
What further work is needed on Building Block 2?	23

#### Anticipatory Action Building Block 3:

Pre-arranged Finance	24
What financing instruments can be used for AA?	24
What funding sources are available now for AA?	27
When is funding needed for AA?	28
Lessons learned for financing AA	28
What further work is needed on Building Block 3?	29
Links to relevant learning resources	30

ASEAN	Association of Southeast Asian Nations
CERF	Central Emergency Response Fund
DG ECHO	The Directorate-General for European Civil Protection and Humanitarian Aid Operations of the European Commission
DRM	disaster risk management
DRR	disaster risk reduction
FAO	Food and Agriculture Organization of the United Nations
GBV	gender-based violence
GESI	gender equality and social inclusion
IASC	Inter-Agency Standing Committee
IBF	impact-based forecasting
IFRC	International Federation of Red Cross and Red Crescent Societies
NGO	non-governmental organization
ОСНА	United Nations Office for the Coordination of Humanitarian Affairs
SADDD	sex, age, disability disaggregated data
UNICEF	United Nations Children's Fund
WFP	World Food Programme

## FOREWORD

Anticipatory action is driving a change in the way humanitarian and development actors are approaching predictable crises. The fact is, increasingly, we can predict disasters. Thanks to technological advances, early warning information is more accurate and readily available than ever before. These gains also come with the responsibility to act on them.

Anticipating a disaster and equipping communities with cash, seeds, tools, or veterinary care ahead of time does more than preserve people's food security and peace of mind – it preserves their dignity, too. Importantly, by protecting families' sources of food and income throughout a crisis, anticipatory actions help to preserve the progress communities have already made, from better nutrition to education, and make them more resilient to future shocks.

A recent multi-partner evaluation on anticipatory action in ASEAN showcased that across the sector, terminology and what anticipatory action needs to be more coherent and streamlined. As the concept has gained paced, in a similar fashion so has the ways to describe and coin this area of work. Careful use of language and clear definitions need to be incorporated, particularly in interactions with those new to the agenda who find the multiplicity of acronyms and terms confusing. There is confusion on what is needed to build a system and technically what are the key building blocks. Organizations regionally (particularly, the Asia-Pacific Technical Working Group on Anticipatory Action) involved in advocating, communicating, or building capacity for Anticipatory Action, need to consider aligning the vernacular to address this issue.

To address this concern the Asia-Pacific Technical Working Group on Anticipatory Action has made it a priority in the 2022 workplan to develop a Technical Standards for the approach moving forward. It aims to help guide both government and humanitarian/development partners who are new to this area and not only address the terminology concerns, but the technical ones as well. The document is further inspired and built upon the foundations of the ASEAN Framework on Anticipatory Action in Disaster Management. By doing so, we aim to align and build on the leadership ASEAN has taken to bring coherency to the approach in the sub-region.

For the development of these Technical Standards, the consultation process ran from November 2022 to March 2023 and incorporated members of the Asia-Pacific Technical Working Group on Anticipatory Action, which has over 60 members across 26 organisations from UN, I/NGOs and civil society operating in the Asia-Pacific region. Drafts of the Technical Standards were also shared with country level Technical Working Groups in Bangladesh and the Philippines. The consultation has comprised of an initial three workshops across the building blocks of anticipatory action, a meeting on the first draft, alongside several bilateral engagements throughout.

The Asia Pacific Technical Working Group on Anticipatory Action would like to thank Zoe Scott and Dorothy Sang for their independent review, consultation and formulation of these technical standards.

#### Catherine Jones and Raymond Zingg

Co-leads of the Asia Pacific Technical Working Group on Anticipatory Action

## What is Anticipatory Action?

The ASEAN Framework on Anticipatory Action in Disaster Management<sup>1</sup> defines Anticipatory Action (AA) as:

> A set of interventions that are carried out when a hazard poses imminent danger based on a forecast, early warning or pre-disaster risk analysis. Anticipatory action is taken by an individual or organization before an anticipated disaster to mitigate its impact on people, assets and infrastructure that are likely to be affected.

The Framework was developed following an extensive consultation in the region from November 2021 to May 2022. As such, this Technical Standards document uses the Framework's definition as its starting point and builds out other elements of the Framework.

AA is different from other types of disaster response, because all the activities take place 'before an anticipated disaster'. Most disaster response is still provided after a disaster has struck, or after the peak impacts. Support can take many months, or even years to materialise. Many humanitarian organisations are trying to provide disaster support earlier, but often this 'early response' is still implemented when the shock happens, or shortly afterwards. AA is different, in that the activities are planned and implemented prior to the disaster, with the aim of reducing its impact on people's lives and livelihoods.

However, AA is also different from other types of disaster preparedness, prevention and resiliencebuilding, because it is 'based on a forecast [or] early warning'. Anticipatory actions relate to a specific 'imminent danger', and aim to reduce the impacts of that specific event, rather than aiming to generally build long-term resilience and reduce people's vulnerability to a hazard. AA is activated by pre-agreed and risk-informed triggers, making it different from general preparedness activities, for example, stocking grain reserves or building flood defences. Continuous disaster prevention and preparedness activities are very necessary where people face serious and cyclical risks. AA is needed in addition to these activities, when a specific event has been forecast and steps urgently need to be taken.

AA is designed to have a protective intent, and activities will vary depending on the specific location and forecast hazard, as well as the unique vulnerabilities of different communities. Examples include cash transfers to enable households to buy essential supplies before markets are cut off, or to enable them to evacuate. AA can also be conducted at an organisational level, for example, actions to ensure that key services can continue throughout a shock. It is worth noting that while the terminology and systematic planning of AA is relatively new, acting ahead of a disaster when a forecast is issued to prevent or mitigate expected impacts is not new for the region.

<sup>&</sup>lt;sup>1</sup> Please see the ASEAN Framework on Anticipatory Action in Disaster Management (2022).

#### FIGURE 1



Anticipatory Action in the Disaster Management Continuum

Source: Adapted from the ASEAN Framework on Anticipatory Action in Disaster Management.

Therefore, AA fits into a continuum of comprehensive disaster support, and complements other activities. AA is not a silver bullet, and other types of disaster support are essential to ensure that people are protected from disasters. This includes long-term disaster prevention and mitigation, as well as general resilience-building activities. After a shock, disaster response activities and reconstruction efforts to support communities and help governments rebuild are likely to still be needed. AA can complement these efforts, reducing impacts through time-bound earlier response where possible.

This narrow definition of AA is not always well-understood. Some organisations and individuals have a looser definition of AA, for example, including any activity conducted ahead of a disaster, regardless of whether it is fully implemented before the peak impacts, or including activities that are not necessarily actioned based on pre-agreed, risk-informed triggers. ASEAN's definition makes a useful distinction between AA and wider preparedness work, clarifying AA's niche role in the disaster management spectrum. The ASEAN Framework establishes AA as being actions with a protective intent, implemented before the main impacts of a disaster, with pre-agreed and risk-informed triggers.

Some organisations use different terminology, or undertake AA without specifically labelling it as such. For example, many governments take steps before a forecast shock to reduce its impact, such as releasing early warning information or conducting evacuations.<sup>2</sup> Whilst the term 'Anticipatory Action' is new, the concept and aims are not. Some organisations have also referred to these activities as 'early warning / early action', or used the term 'forecast-based financing' or 'forecast-based action', to make the distinct link that actions are taken based on forecasted risk information.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> The Government of Bangladesh, for example, are planning to open Cooling Centres prior to forecast heatwaves in Dhaka. This is an example of Anticipatory Action that may not explicitly be labelled as such.

<sup>&</sup>lt;sup>3</sup> For example, please see the Red Cross EU Office website.

Complexities on the ground in a disaster scenario may make it difficult to distinguish AA from early response or longer-term preparedness. For example, compounding disasters from cascading hazards or situations of protracted crisis can present a confusing scenario, as to whether a disaster situation is being responded to, or a future recurrence is being avoided or anticipated. This is potentially more of an issue for slow-onset crises, when AA can be conducted over many months. Using a narrow definition of AA can help in this regard, focusing on actions to address a specific predicted disaster and its expected impact, rather than to address broad vulnerability. Therefore, AA and 'early response' should be considered separate activities but part of the same continuum of disaster support.

#### AA will not be possible for every type of hazard,

in every location. It can only be used for certain types of hazards and in locations that meet specific conditions. This document aims to set out some of the pre-conditions and scenarios where AA can be an effective tool within the Disaster Manager's toolbox, whilst being mindful of its technical challenges, considerations and tradeoffs. Because AA is limited to the period before a disaster, often only a few days, there is a limit to the activities that are possible and therefore the amount of resources that can be spent in this phase. AA complements, but cannot entirely replace other forms of disaster response. Evidence is growing that AA is a cost-effective way of supporting vulnerable people in a dignified way,<sup>4</sup> and international attention is now focused on how to scale-up experiences from numerous pilots, to fully realise the potential of AA.

The international community has been experimenting with AA on a small-scale, and is still learning how to use the approach most effectively. Many challenges to AA remain and need to be overcome. These include the difficulty of prioritising future needs in contexts of scarce resources, limited tailored evidence to convince decision-makers, and scepticism over the reliability of forecasts. A number of evaluations and lessons-learned reviews have been undertaken or are underway,<sup>5</sup> and as the international community continues to test its abilities to scale up, understanding of both the challenges and supporting conditions will continue to emerge.

Because of the nature of AA, considerable planning and systems-building must be undertaken for activities to be effective. The ASEAN framework sets out three essential building blocks that must be functional for an AA system to be effective:



These topics are explored further throughout this Technical Standards document.

<sup>&</sup>lt;sup>4</sup> For example, please see Weingärtner, L et al (2020) 'The Evidence Base on Anticipatory Action', World Food Programme.

<sup>&</sup>lt;sup>5</sup> For example, OCHA have published a number of evaluations related to their AA pilots for the CERF via the Centre for Disaster Protection; the Centre for Humanitarian Data have been assessing the availability of necessary data for AA; and NGOs like World Vision have been conducting relevant learning exercises, such as this Review of Early Warning Systems.

#### **FIGURE 2**

#### Anticipatory Action Building Blocks



Risk information, forecasting and early warning systems

#### **BUILDING BLOCK 1**

AA is activated on pre-agreed, risk-informed triggers, so requires access to reliable risk information, accurate forecasts and established early warning systems.



Planning, operations and delivery

#### **BUILDING BLOCK 2**

AA is designed to take place ahead of an anticipated disaster, in order to minimise its impacts. This requires advance planning to ensure that appropriate activities can be triggered and delivered in time.



**Pre-arranged finance** 

#### **BUILDING BLOCK 3**

Finance must be planned and arranged in advance so that sufficient money will be available when it is needed, without causing delays.

Source: Adapted from the ASEAN Framework on Anticipatory Action in Disaster Management.

### **Developing Technical Standards**

As AA is still a relatively new concept, technical understanding of how to develop the three building blocks has not previously been captured and documented in a formal process across different organisations. Technical expertise is typically resident in pockets within and across organisations. This Technical Standards document has been developed to help capture and share that knowledge more widely. The document is structured around the three building blocks, drawing on a participatory consultation process<sup>6</sup> amongst members of the Asia Pacific Technical Working Group on Anticipatory Action, to distil experiences and emerging best practice. This Technical Standards Standards Document has been designed to be a 'living document'. Given emerging learning and continued experimentation in this space, this document will be periodically reviewed and updated, and it is recommended that this process is formalised through creating a standing agenda item/ side-event at the Asia Pacific Dialogue Platform on Anticipatory Action. Areas for further work and research have also been identified under each building block.

<sup>&</sup>lt;sup>6</sup> The consultation process ran from November 2022 to March 2023, and incorporated over 60 members across 26 organisations that sit in the Asia-Pacific Technical Working Group on Anticipatory Action, across three rounds of feedback.





## ANTICIPATORY ACTION BUILDING BLOCK



Because AA is activated on pre-agreed, risk-informed triggers, a necessary building block is access to reliable risk information, accurate forecasts and established early warning systems.

## What information and data are needed for AA?

Accurate forecasts are essential for AA in order to know when and where a hazard will strike or intensify. According to the ASEAN definition, AA is activated when a hazard 'poses imminent danger'. Therefore, hazard forecasts are an essential part in providing this information and guiding organisations to know when and where anticipatory activities should be activated. Fortunately, the forecasting of climate and some geological-related hazards, including cyclones, volcanic eruptions, drought and flooding, has improved significantly in recent decades, although this remains the most complicated part of AA.

However, AA implementers ideally need access to different types of risk information, to help understand what impacts the hazard may have,

not just when and where it will occur. There have also been advances in the production of risk information and the collection of data on disaster impacts, vulnerability and exposure to climaterelated hazards in many countries. Governments have collected damage and loss information for various sectors (agriculture, water and sanitation) for decades, which can help identify trends. Organisations will also need to gather risk information about the community - ideally including sex, age, disability disaggregated data (SADDD) - to fully understand risks and impacts. Pre-existing inequalities shape the impact of disasters on individuals and so it is important to consider these. This information is critical to develop impact-based triggers, which are discussed further below.



Even where there may be gaps, these data sets, both historical and current, can be combined with forecasts to better understand where AA should be activated and whom should be targeted. Both types of information are important for effective AA. For example, it is not enough to know that heavy rainfall is expected in a few days' time in a particular region. If this forecasting information is combined with data to determine where impacts will be strongest, the right areas and communities can receive inclusive anticipatory support, should the predicted impact be judged severe enough to justify action. Conversely, knowing where people are at risk of flooding is useful for risk reduction, but forecasts can help determine when targeted anticipatory actions should be delivered to provide timely support.

Organisations use different types of forecasting and risk information for AA, partly depending on the hazard type, available data, organisational preferences, type of activities, scale of operations and technical capacity. There is a wide variety in the different approaches taken and the types of scientific information utilised. Sometimes approaches have developed organically, as organisations have trialled methods and implemented pilots. However, as AA develops, there is a need to clarify best practice and build sustainable approaches that can be used at scale. These Technical Standards explain some of the options, their benefits and challenges, and highlight emerging best practice.

## What type of forecasts are appropriate?

Forecasts must be assessed and monitored for accuracy to ensure that AA will be mostly triggered at the right time. Forecasts cannot always correctly predict the future, but they need to be sufficiently reliable to continue to build a case for AA that protects communities at risk. Forecasts with limited accuracy and certainty can undermine the case for AA and create distrust in the approach. Organisations should take care to assess the uncertainty of the forecasts they use for AA. Forecasts can be analysed in different ways; for example, a contingency table can be created, comparing the number of times different forecasts correctly predicted an event, or the number of times an event occurred without being forecast. This can help to assess the proportion of events that would be properly anticipated (the 'probability of detection') and create a 'false alarms ratio'. Organisations will differ in what they consider to be reasonable, depending on their risk appetite, donor support and other factors, such as the intensity of the event. For example, in the Philippines, OCHA's assessment for the AA pilot found that 72-hour forecasts for typhoons were 70 percent accurate (and higher for higher category typhoons), which was acceptable to the organisations involved.

Forecasts get more accurate closer to the hazard event, but this needs to be balanced with ensuring sufficient time is incorporated for the anticipatory activities to be undertaken. Organisations will need to carefully consider their risk appetite and the level of forecasting accuracy they are willing to act on. This will also be affected by the hazard type, the context, and the planned activities. The forecasting timescale obviously differs significantly between slow-onset crises like drought, and rapid-onset disasters like typhoons. The window of opportunity to act is much longer in a slowonset situation, although forecasts still need to be sufficiently accurate to activate AA. Organisations in the region are typically using 3-5 day forecasts to activate AA for rapid-onset hazards like typhoons, and 1-3 month forecasts for AA for slow-onset disasters like drought.

Long-term forecasts, such as seasonal projections, do not have the level of specificity or certainty needed to be used as triggers for AA, but provide important information for longer-term planning. They may indicate that a very wet or dry season lies ahead, but cannot predict exactly where and when flooding or drought will occur. Longer-term projections, for example seasonal forecasts or climate change models, can play a role in disaster risk reduction or in organisational preparedness planning, but are not suitable alone for triggering AA. Instead, seasonal projections can be helpful for organisations to determine the schedule for AA preparation and activities, or investigating closer monitoring at national level. This may be particularly the case for slow-onset hazards, such as dzud in Mongolia, where seasonal projections can be combined with other indicators to inform a trigger mechanism.<sup>7</sup> Reliable shorter-term forecasts and dynamic risk information are needed for AA, to predict more precisely the location and timing of a hazard event. However, long-term forecasts provide complementary information, which can help organisations with risk identification, prioritisation, mapping and developing crisis timelines. More needs to be understood about how broader knowledge about climate change and seasonal phenomena such as El Niño could potentially be incorporated into risk models.

<sup>&</sup>lt;sup>7</sup> Precipitation levels from the previous summer and other data are used to understand whether dzud is likely to be a problem for the upcoming winter. These seasonal projections inform the risk mapping. Sub-seasonal weather forecasts with approximately 60-70 percent accuracy are then used to give a lead time of 2-3 weeks for periods of extreme cold. The forecast temperature and the predicted snow height are incorporated into the trigger to identify areas at high risk of dzud. For more information, please see Start Network / Save the Children / World Vision Mongolia Anticipation of Harsh Winter 2018-19 Impact Assessment.

# Which hazards can be forecast with sufficient accuracy for AA?

AA is not appropriate for some hazards, because they cannot be forecast with sufficient accuracy far enough in advance to implement meaningful mitigative actions. This may be because of the type of hazard, in that forecasting capacity is not available for that type of shock. However, it may also be because of a lack of operational capacity to be able to activate meaningful activities in time. Just because a hazard can be forecast to occur at some point in the future, it does not mean that it is suitable for AA – being able to generally predict an impending crisis is not enough. Earthquakes are an example: experts may believe that one is imminent or 'overdue', and might know that a particular community based on a fault line would be heavily impacted, but forecasts cannot yet accurately predict when the earthquake will occur. Forecasts used for AA need to be accurate enough that they can be confidently used to activate AA with the necessary lead time.

Organisations operating in the region report using AA for a wide range of hazards, including typhoon, river flooding, drought, volcanic eruptions, dzud, and heatwaves. Other hazards are also being investigated to ascertain and progress their suitability for AA, including landslides, livestock disease, human disease outbreaks and forest fires. There has been some discussion of experimenting with AA for other human-induced disasters, for example, conflict, displacement or civil unrest, but this is embryonic and likely not possible to predict with sufficient accuracy.

#### FIGURE 3

#### Use of Anticipatory Action for different hazards



## What are triggers and thresholds?

One of the differences between AA and other types of disaster preparedness and response is that AA activities and finance are automatically initiated based on pre-agreed criterion, known as triggers. This Technical Standards document differentiates between triggers and thresholds for clarity, but acknowledges that they are related, and many organisations use the terms interchangeably. A 'trigger mechanism' is based on a set of information comprising where and when AA will be provided; which forecast will be used; with what lead time; and who is responsible for monitoring and confirming the activation. It will also set out the thresholds for launching AA - these are the specific points on the scale of the hazard event or impact that need to be met, in order for financing to be released and activities to commence. Therefore, thresholds may vary, and multiple thresholds can be used within the same trigger mechanism.

A wide variety of triggers and associated thresholds are used for AA. A trigger can be based on a specific indicator, a set of indicators, or an index that is forecast to occur: for example, the predicted wind speed in 72 hours' time. It can also be a prediction of loss or impact (such as damage to property) or a general judgement of severity (such as a government declaration of emergency).

Triggers can be very simple or complex combinations of indicators, informed by statistical modelling and machine learning. Sometimes several indicators and thresholds are used or combined: for example, AA could be designed to activate if thresholds are met of both '70 percent forecast probability of the hazard occurring and 10 percent of houses expected to be destroyed' and '50 percent forecast probability and 50 percent of houses destroyed'.

Some organisations differentiate between 'hard' and 'soft' triggers:

 Hard triggers use objective, quantitative forecast data and risk information that automatically activate a response once thresholds are reached. These can also be described as deterministic triggers: for example, a forecast of a certain amount of rainfall in a set period of time, or probabilistic forecasts: for example, where a forecast gives a 75 percent chance of a certain amount of rainfall.

• **Soft triggers** combine objective data with expert judgement or decision-making processes that combine to activate the AA: for example, a committee decision or a government evacuation order for hazard-risk areas.

Discretionary elements can also be incorporated into a trigger mechanism, although care should be taken to protect against politicised decisionmaking and delays. Ideally, triggers should automate decision-making as much as possible, based on objective, reliable data. However, some organisations have found that a degree of discretion or a stop mechanism is useful, especially where there are information gaps and the data is imperfect, or where several organisations are coordinating a response across a large geographical area. For example, AA pilots related to OCHA's Central Emergency Response Fund (CERF) in Nepal have trialled a discretionary element where, once the threshold is met, the Resident Coordinator's Office is required to consult with other agencies and make a decision either to pause or move ahead with activation. This allows the incorporation of other types of information, such as whether there have been recent, possibly compounding shocks, or the existence of current government or humanitarian operations. If a discretionary element is to be included, there should be very clear protocols around who has discretionary powers within a country, the information they will consider, the timelines, and the conditions on which they are able to override an activation. This requires further investigation and not all organisations are supportive of discretionary elements within triggers.

There are different approaches to identifying the most appropriate trigger and associated thresholds for AA. This is a very important part of AA to get right, and more learning is needed. There have been instances where the selected trigger has not been a good indicator of impact, and this can result in scenarios where AA is not triggered despite the impacts of a shock being experienced. This can happen with very localised shocks, for example, downstream riverine flooding.

## What types of triggers are typically used for AA?

AA triggers are often based simply on the magnitude of the forecast event. This approach is commonly used where historical data can help to correlate a critical impact severity with a certain hazard magnitude. When a forecast shows this hazard threshold will likely be met (e.g., a particular temperature, windspeed or amount of rainfall) then AA is activated. This information is then often combined with static risk maps or vulnerability information, to identify areas or households that are most likely to need support. This kind of approach is best suited for small-scale pilots and localised interventions (including relatively short river basins).

To realise AA at regional or national scale, different methodologies offer more promise. If AA is planned for a small geographical area, then a single hazard magnitude threshold, complemented with contextual understanding of risk in that area, may suffice. However, in order to cover a larger area, multiple hazardbased thresholds for different areas become necessary. Ideally, the priority areas would then also need to be identified, based on the expected scale and level of anticipated impacts. This is particularly the case for hazards like riverine flooding, where the impacts are widespread, but vary considerably based on the local context. Operating across a large area quickly becomes technically and operationally challenging. Actors wanting to work at scale (for example, national governments and UN agencies) are now using an approach called 'Impact Based Forecasting', where forecasts are combined with existing risk data to quantify impact levels for different areas of concern, and AA activates in areas where the pre-agreed impact threshold is reached.

Impact Based Forecasting (IBF) models are generally considered to be the best approach for trigger development. With IBF, historical damage data is correlated with hazard magnitude data to determine impact thresholds: for example, the number of houses destroyed at a particular windspeed, or the percentage of crops affected by a certain flood water level. IBF is generally viewed as best practice because it helps to identify when an activation is required (if the impact threshold is to be reached), as well as the communities most at risk of severe humanitarian impacts, providing sector-specific and contextspecific decision-making information. Flexible, country-wide impact thresholds that would trigger AA can be set using this methodology. The impact forecasts are then brought together with a predictive model. This approach has been used for typhoon AA in the Philippines at the municipal level and is currently being tested by FAO in Lao People's Democratic Republic for drought, at the provincial level. However, it cannot be used in all contexts, as IBF requires a lot of historical damage data and vulnerability and exposure information at the local level which is often not available. There is also the question of internal capacity and resourcing for organisations to be able to establish IBF.

There are a vast range of impact indicators that could be used to inform the thresholds for AA. Organisations report using, for example, 'number of houses destroyed', 'percentage of crops affected', 'number of farmers losing a set amount of livestock' and 'reduction in rice yield', amongst many. Obviously, organisations will select impact indicators that relate to their sector or area of interest, and that are meaningful for the impacts they are trying to address with AA. It is important to try to eliminate subjectivity when selecting an impact indicator. For example, 'the percentage of population affected' is hard to quantify, and may be judged differently by different people. Similarly, 'percentage of houses destroyed' is a more objective impact indicator than 'percentage of houses affected'. Organisations often combine an impact indicator with a hazard probability forecast to determine one or more thresholds. For example, the threshold could be set at a 70 percent forecast probability of the hazard occurring and 20,000 houses destroyed.

## Steps to develop triggers and thresholds

Many factors will shape the selection of a trigger mechanism and its thresholds, including the type of hazard and the predicted impacts on the population, as well as contextual factors, in particular, the technical capacities and data availability in the country. Ultimately, the trigger depends on the desired outcome. Many organisations find trigger development the hardest part of AA to get right.

The following steps are essential to develop impact-based triggers and select thresholds:

- 1 Collect historical disaster impact information for the selected hazard and targeted geographic area and decide the priority disaster impacts. This data will likely be spread across different levels and organisations. In some countries it may not have been collected and collated and so may have to be pieced together.
- 2 Map out available forecasts and assess their appropriateness to incorporate into the trigger mechanism: for example, their coverage and lead times. Forecasts can be verified using historical observations to assess how often the trigger would have been reached, and whether this would have matched the situation on the ground.
- **3** Define hazard magnitudes to identify what is normal and what is severe. AA typically focuses on extreme events. Historical data can be used to calculate what is unusual for each location, and to identify the return period of the most extreme events (i.e., the probability of an extreme event occurring in a given year).
- 4 Analyse links between hazard magnitude and impact to gain an understanding of what impact can be expected for which people, given a particular hazard magnitude. This can range from expert judgement, or the identification of a single point above which significant impact had occurred, through to the use of complex statistical modelling to identify complex relationships.

- Consult with communities and local authorities to understand and inform the critical scale that requires protective actions. It is important to remember that the risk and impact of the hazards are different to various people, community and households, based on their geographical constraints, capacity, and the resources they can access. In this case, a comprehensive risk assessment should include various community groups, including women, children, people with disabilities and vulnerable groups, by using appropriate methods that are relevant to those groups, in line with Gender Equality and Social Inclusion (GESI), along with plans of how information will be disseminated to enable people to act.
- 6 Define and justify impact thresholds. Using the previous steps, determine the level of impact and corresponding hazard magnitudes at which AA should be triggered.

Once it is clear when the AA activation should take place, either static or dynamic risk mapping can be developed to decided where to intervene:

- 7 Identify who or what is most exposed to the priority disaster impacts and where they are located.
- 8 Identify key vulnerability indicators. Once it is known who and what is most likely to be impacted, this can help with understanding why they are negatively impacted – this can be incorporated into a trigger model.
- **9** Generate an intervention map. Depending on capacities, this can either be done by digitally combining the forecast with vulnerability and exposure maps, to predict the expected impact or simply combine vulnerability and exposure information with forecasts using expert judgement to identify the places at highest risk.

Further detailed guidance is available in a Red Cross Red Crescent online manual.

## Lessons learned on trigger and threshold selection

When choosing a trigger methodology to use for AA, there are a number of considerations and trade-offs that should be carefully evaluated. Approaches towards AA trigger development are still evolving, with much to learn, but organisations emphasise the importance of flexibility and simplicity. Ideally, forecasting models will include a broad range of public forecast data, and be open source so that they are transparent and easily adapted. Not only should the source be open and public, but also regularly updated - with a clear schedule on when new data will be uploaded. Forecast data from national hydrology and meteorological agencies may not be public, but their models often operate at a fine resolution and can help with the sustainability of AA approaches. The model should also perform accurately, with an adequate lead time for anticipatory activities and be based on relevant impacts. Simple, quantifiable triggers are best, that can be easily explained and regularly monitored, e.g., hydrometry indicators in flood prone areas or crop damage. Organisations will likely also want to consider the speed of operationalisation, cost-effectiveness, and whether it aids collaboration with other partner agencies.

Organisations typically use multiple thresholds to match the different phases of AA. AA typically has at least two stages of activity: readiness and activation. For most hazards, particularly rapidonset, it will make sense to have an early trigger for the readiness activities and release of some finance – which has a lower threshold. This can give an initial green light for preparedness activities, such as checking inventories and prepositioning goods. This can be done at the point where a hazard is imminent, but its severity is less clear. A second threshold can then trigger the full activation of the planned anticipatory actions.

Organisations may choose different triggers and thresholds, but they must ensure coordination. It is logical for organisations to use shared triggers and align thresholds where possible, but in many contexts, it will be appropriate to have a selection of different triggers and thresholds depending on who is undertaking the AA, and their priorities. Aligning triggers and thresholds may help with inter-agency coordination and collaboration, and it was viewed as helpful to have a shared trigger approach for the CERF OCHA AA pilots.<sup>8</sup> However, thresholds based on hazard magnitude may need to be localised to be relevant to the context. Also, thresholds will need to differ for different anticipatory activities; for example, crops are likely to be destroyed before houses, so an organisation seeking to support farmers may require a lower threshold for activation of AA than an organisation wanting to rebuild the shelter.

Multiple hazards, including secondary or 'cascading hazards', present a challenge for trigger development. In the case of rapid-onset disasters like typhoons, the hazard event presents an initial challenge, but other secondary shocks (such as landslides, flooding and disease outbreaks) could also benefit from AA in the subsequent days. For example, the Start Fund did not trigger AA for Typhoon Odette in the Philippines in 2021 – as it rapidly intensified only in the final 24 hours before landfall – but working with partners on AA to avert potential subsequent outbreaks of cholera, dengue and other epidemiological outbreaks, as secondary hazards related to the typhoon. While it is theoretically possible to plan and act upon cascading hazards, incorporating multiple and possibly related hazards into trigger mechanisms has not yet been done. Managing multiple hazards remains a resourcing challenge, and more work is needed to explore how this can be managed within AA, and how flexible approaches could work.

<sup>&</sup>lt;sup>8</sup> See learning reports available on the OCHA website

## Who should be involved in trigger development?

A variety of experts and country-level actors need to be involved, to provide access to the necessary data and analysis to inform trigger and threshold design. The national hydrology and meteorological services will normally be key partners providing forecast data, but the decision on triggering AA may be made by the National Disaster Management Agency; also, AA implementers will likely have to work with other agencies and ministries to get access to vulnerability or impact data. For example, a National Disaster Management Agency may have relevant impact data, or a Department of Social Welfare may provide vulnerability data. It may also be necessary to work with sectoral ministries, for example, the Ministry of Agriculture. A wide range of expert input is needed in the design of triggers, to ensure they are appropriate and can be acted upon, and so collaboration should be well planned and coordinated. National Technical Working Groups can play a useful role in this regard.

**Community engagement should be prioritised in the design of localised triggers.** Communitylevel local knowledge can help to ensure that possible impacts are understood and fed into the design of appropriate triggers. This approach can be particularly useful in conflict areas, where national agencies or local government may not be appropriate partners, or have good understanding of local conditions or access to particular areas.

It is important to incorporate expertise in relation to Gender Equality and Social Inclusion (GESI). Concepts of risk, impact and vulnerability can all have a gendered dimension, so incorporating a GESI lens to understand impacts, analyse data and design trigger mechanisms is necessary to ensure an inclusive approach. For example, IBF can incorporate subjective scoring, which can embed gender bias. It is therefore essential to engage organisations with key expertise relevant to addressing gender, age and disability-specific risks throughout the process of design and implementation.

## What further work is needed on Building Block 1?

During the consultation for this Technical Standards document, the following areas were identified as needing additional research or work:

- To facilitate IBF, many countries need improved, reliable, consolidated, and granular loss and damage data, and vulnerability and exposure information.
- Given that hazards are often seasonal, rather than one-off events, a better understanding of how repeated, cascading and compounding impacts can be incorporated into models is needed. For example, two small events may be worse than one severe one, if households do not have sufficient time to recover inbetween.
- How multiple risks inter-relate and how their impacts can compound each other requires further understanding. Reflecting on and learning from each disaster to track how and when hazards evolve, and cascade could offer useful insights for AA.

- GESI considerations are important, but guidance or best practice is needed on how GESI can be best incorporated into the development of triggers.
- Improvements are needed in modelling for landslides, human disease outbreaks and livestock disease outbreaks, to be able to extend AA to cover these hazards.
- Much of the risk assessment and modelling technical expertise resides in the private sector. Capacities and expertise must be strengthened in the public sector, so that there is sufficient understanding in-house.
- More progress is needed on using AA for slow-onset hazards. These shocks provide a rich opportunity for AA, as lead times are much longer, allowing for a greater range of activities.



## ANTICIPATORY ACTION BUILDING BLOCK

# Planning, Operations and Delivery

Anticipatory Action is designed to take place ahead of an anticipated disaster, in order to minimise its impacts. This means that considerable advance planning must take place to ensure that appropriate activities can be triggered and delivered in time.

## What activities are appropriate for AA?

There are a wide range of different types of activities that can be provided in anticipation of a disaster. It may be that the government is undertaking AA, but has not formally labelled it as such – for example, by linking an Early Warning System with evacuations. Typical examples of anticipatory actions that have been implemented by humanitarian agencies in the region include distribution of cash and goods to households prior to the disaster, including food, dignity kits, fodder, and waterproof storage drums.

The specific action selected for AA will depend on many factors, including the expected impacts of the disaster and the priority needs of the community, with a focus on inclusivity; the type of hazard and the lead time for action; operational constraints and budget; local systems and capacities; and the priorities of the organisation offering support. Organisations may also want to take into account evidence of the effectiveness of activities, or the longevity of impact.

AA should have the following distinguishing design characteristics (in addition to normal standards of good humanitarian and development practice<sup>9</sup>):

<sup>&</sup>lt;sup>9</sup> For example, 'do no harm', inclusion, and following best practice.

- Actions should have a protective and mitigating effect. The focus of AA is on reducing the impacts of an impending, specific disaster – not just generally supporting preparedness or response. In particular, actions should be designed specifically for the anticipatory phase, not just typical response activities done earlier.
- Actions must be planned well in advance of a disaster, with corresponding implementation plans, protocols and associated technical guidance.
- Actions must be appropriate for the timescale. They must be operationally feasible to fully implement the activities in the time available.<sup>10</sup> This is most challenging for rapidonset shocks. For example, work on protecting infrastructure is not feasible in a 3-5 day timeline. The organisation implementing AA must be able to get goods into place and distribute them in the lead-time available. (If goods are just pre-positioned but not distributed until after the shock, this is not AA, but preparation for an early response). Furthermore, actions should be appropriate for the timescale they are being provided in; for example, distributing drought-resistant seeds well after the planting season has finished will limit the effectiveness of the support.
- Actions should be undertaken with a 'no regrets' approach. Because there is always a risk that the forecasted hazard may not develop as expected, AA should benefit the community, even if the hazard event does not occur.

AAs are not just response activities that are carried out earlier. There may be a tendency to assume that AAs will be the same as response activities for a particular hazard, just implemented earlier. This can be because people have expertise and operational capacity for that type of activity. However, AAs should be justifiable in terms of



why they need to be delivered before a crisis, and how they will minimise impacts. While important to align with other response activities, it will be beneficial to start afresh, identifying the range of possible activities, and assessing how and why acting in advance in a particular way makes sense. Evidence from other activations, monitoring data, learning exercises and evaluations can help guide design.

Developing a theory of change has been a useful exercise for some organisations when designing AA; this is a process by which actions are linked to the expected/desired outputs, outcomes and impact. Going through this process helps to explain the expected outcomes of AA (and the preconditions), and this can in turn help to clarify the timing of the intervention and how it will reduce certain predicted impacts. A theory of change exercise can also be a good advocacy tool with communities and governments, to explain and consult on how AA is expected to have an impact. Some useful guidance and examples are in IFRC's Early Action Protocols, and the value of the process is laid out in WFP's evaluation of Anticipatory Action.

**Technical Standards** 

<sup>&</sup>lt;sup>10</sup> It is also important to consider that different groups may need different amounts of time to prepare themselves; for example, families with young children, pregnant women, people with disabilities and older people may need more time for evacuation, or specialist equipment. See, for example, Park E. et al (2019) Leave no one Behind: Experiences of Persons with Disability after the 2017 Pohang Earthquake in South Korea, International Journal of Disaster Risk Reduction.

## **Using cash**

Cash can be an effective mode of AA. There are lots of examples of cash transfers being used for AA in the Asia Pacific region, with some studies providing evidence of a positive impact. The Asia Pacific Regional Cash Working Group and the Asia Pacific Technical Working Group on AA have jointly developed a Practitioner's Note for using AA and Cash Transfers for rapid-onset hazards. The benefits of cash transfers over goods are that they can be quicker and simpler to implement, as long as the necessary payment mechanisms are in place. Cash will not always be the best modality for AA, and a market evaluation can help to understand whether cash or in-kind transfers would be most appropriate. Decisions on providing cash, in-kind or a mix of both (cash+) should also be based on prior analysis regarding feasibility, appropriateness, and findings from pre-crisis surveys or consultations with at-risk households. Pre-crisis surveys will give a good indication of the type of support preferred by at-risk households, and how cash will likely be spent. This will depend on what other type of AA support is received and other factors.

#### Overall, the purpose of AA cash transfers should be to fill at-risk households' liquidity needs

ahead of the disaster. This will be in addition to the amounts set out in a Minimum Expenditure Basket, which is designed to cover regular monthly needs – AA transfers should be the extra cash households need to take preventive actions. Households will not necessarily spend all the AA cash before the event, and may choose to spend some immediately after the shock, which will also bring benefits. Decisions around how much to spend, on what, and when are up to the households themselves. To be classed as AA rather than early response, cash should be received in advance of the crisis, and for rapidonset shocks it should be unconditional.

All cash and voucher assistance activities should include gender-based violence (GBV) risk mitigation to adhere to the do-no-harm approach. Evidence has shown that in some contexts, targeting women with cash or voucher assistance without mitigating GBV activities can contribute to household tensions and possibly intimate partner violence.

Further guidance on GBV mitigation in relation to cash and voucher assistance is available in a Companion Guide to the IASC GBV Guidelines.



# What lessons have been learned on how to design AA well?

Communities must be involved in the design of AA. This requires organisations to communicate with communities, working with local partners as much as possible to align with local priorities and existing mitigative actions. A useful starting point for consultation is to identify which hazards people want protection from, and build out ideas for anticipatory support that meet the key characteristics for AA mentioned above. This can help to clarify what actions communities are already taking and will take in future, and what support organisations can usefully provide to complement such actions. Consultations will need to be mindful of the local culture - for example, engaging local religious leaders. Meaningful engagement takes considerable time and costs money. Organisations with long-standing good relationships with communities are likely to be best placed to have built up the necessary trust.

Gender Equality and Social Inclusion (GESI) should factor in both the design process and the anticipatory activities themselves. It is essential that organisations with expertise on incorporating GESI in disaster management at a local level are involved in AA, as well as affected communities themselves. Involving women and excluded groups in the design process will lead to more effective and inclusive AA. For example, people with disabilities may have particular needs that should be reflected in evacuation plans; it may be possible to add in dignity kits and other non-food items that are customised to the needs of affected populations with other in-kind transfers.

Services are often disrupted during disasters – this should be factored into the design of AA. Service providers themselves, as well as AA implementers, can use forecasts to anticipate disasters and change their operations accordingly. For example, some services could switch to remote provision during the readiness phase, including mobile hotlines or online training.

Government should be supported to take a lead role in AA design and implementation. AA should align with existing government systems,

policies and programmes. Because AA has largely been funded and implemented by humanitarian agencies to date, there can be a tendency for such organisations to overlook government involvement at the design stage. This will not be appropriate everywhere: for example, in countries where government is not supportive of AA or does not work collaboratively with the international community. However, in the majority of countries in the region, government must be engaged as a critical partner in the design and delivery of AA. There are many governments in the region who are highly engaged in AA, early response, risk reduction and related approaches, such as shock-responsive social protection. Continued leadership and engagement is critical for the future scale and sustainability of AA.

The design of anticipatory activities must be linked with the other building blocks: activities should be relevant for the selected trigger and the available finance. As mentioned above, when designing activities, organisations must be mindful of what is achievable in the forecasting timescale for that particular hazard. There should be collaboration and discussion on this point, particularly as earlier forecasts provide more time for activities, but have greater uncertainty. There is therefore a trade-off that needs to be carefully navigated to ensure as much lead time as possible, which will potentially broaden the range of possible activities, without reducing the accuracy of the forecasts too much. There should also be a link between the trigger type and the proposed anticipatory action - the trigger should justify the initiation of the action. Similarly, there needs to be collaboration with those prearranging the finance for AA, to ensure that sufficient funds will arrive at the appropriate time for activities and pre-positioning. Ensuring the funds are triggered to release ahead of required actions is an essential part of ensuring that AA can become more localised, as unlike their international partners, local actors will most likely not have reserve funds to carry out AA if triggered without the finance.

There is value in positioning AA within existing disaster risk reduction (DRR) and disaster risk management (DRM) initiatives and systems. The ASEAN framework has made the case for aligning DRM policies and processes with anticipatory action,<sup>11</sup> yet pilots have often been run as standalone projects, which has resulted in AA often becoming siloed. However, some organisations have found there is greater community and agency buy-in and understanding if AA is attached to an existing risk reduction or risk management initiative. This also helps to demonstrate that AA is not a silver bullet, but an integrated part of comprehensive disaster management and offers an opportunity to build on existing relationships, knowledge, systems and capacities - particularly with governments who already engage with the international system on DRM. Linking AA to

existing programmes, initiatives and tools will help to mainstream and ensure the sustainability of the approach. This is likely to be quite different for slowonset shocks like drought, as timescales are much longer, potentially creating more opportunities for overlap and integrated approaches.

Designing technically sound AA projects will require links with a wide range of experts, from the design phase onwards. Because AA can cover a broad range of sectors and impacts, it is important to work with a range of expert organisations. For example, AA practitioners may need to get design input from livestock experts working in the country, in order to fully understand how to best protect animals ahead of a risk, and what would and would not work in the specific context.

# What lessons have been learned on how to implement AA well?

AA is normally conducted in two phases: readiness and activation. Readiness activities are triggered first, to prepare for full activation. This might include checking inventories or purchasing and prepositioning goods ready for a quick distribution. This is particularly important for rapid onset, where an additional few hours to pre-position goods can make a significant difference. A higher threshold is then used to trigger a full activation, i.e., full release of funding and initiation of the anticipatory activities.

However, continuous routine activities are also needed to support AA. Outside the triggered readiness and activation phases, there are also general activities that are required to ensure the AA system is ready to respond when needed. Examples include training local staff, conducting simulations and monitoring triggers.

**Conducting AA simulations is good practice and brings many benefits.** They can provide vital insights into practical obstacles that need to be overcome, and to check the feasibility of particular activities. Rehearsing roles and responsibilities can also be a form of training in itself, whilst also raising awareness, ensuring ownership, and building community capacity. They can also be particularly useful in identifying issues with inclusivity. However, they do require money and time to implement, which can be a barrier. Some organisations are now collecting evidence of their impact which may be useful to demonstrate their necessity in future.

Government leadership and inter-agency collaboration are essential to ensure a coherent narrative. As mentioned above, governments should play a leading role in the design and implementation of AA. This can help to ensure alignment with existing policies, strategies, systems and programmes across the disaster management continuum, and between ministries. Different agencies can be conducting AA in a particular country, using different triggers and thresholds for a range of activities. This can create confusion – strong communication between agencies and with government is needed for a

<sup>&</sup>lt;sup>11</sup> See ASEAN Framework on Anticipatory Action in Disaster Management.

coherent narrative and to maximise opportunities for knowledge sharing and collaboration. This can be through relevant Technical Working Groups, for example – these exist or are planned in the Philippines, Bangladesh, Pakistan, Viet Nam and Lao People's Democratic Republic. The OCHA CERF AA pilots have helped to emphasise interagency coordination for AA, and the importance of a coherent message to external stakeholders.

Ensure Monitoring and Evaluation (M&E) is integrated into the AA, to help with the generation of evidence of impact and to ensure improvements can be made over time. There should also be a feedback mechanism so that beneficiary perspectives can be collected, reviewed and acted upon. Accountability mechanisms should be designed and in place from the design stage through to implementation, to ensure the community can engage, and are able to feed back or make complaints throughout the process. To promote a more inclusive design and implementation of AA, M&E should integrate gender-specific indicators and participatory mechanisms into project monitoring, and accessible feedback mechanisms.

#### How information is communicated is important.

As noted in the ASEAN Framework on Anticipatory Action in Disaster Management, not only should plans be in place that consider when and with whom information is shared – including between international and national actors, governments and the community, at regional, national and provincial level – consideration must also be given to how that information is shared for different audiences. In most countries, communities should ideally receive information on early warning and impending shocks from government, rather than from humanitarian actors. There needs to be consideration of how information will be shared between government, UN agencies, implementing organisations and communities, when thresholds are met and AA is activated. This requires strong collaboration and coordination, particularly with local authorities. Simulations and pre-disaster risk assessments can help ensure all actors – including the communities – understand their roles, and help to test the strength of messaging, along with appropriate channels. It is particularly important to ensure that communication is considered through a GESI lens. Targeted communication campaigns that share examples and evidence of successful preventative actions in previous disasters can also help to ensure communities understand what forecast information means in real terms, and how the planned actions can protect themselves and their assets.

Linking AA with social protection systems to improve delivery of support is being investigated by several organisations, although there are not yet examples of AA activations using social protection in the region. For example, use of the national social protection programme has been included in the CERF AA pilot for the Philippines, although this has not triggered at the time of writing. Social protection programmes operate effectively in many countries in the region, and several have been used to channel disaster response support to affected households, for example in the Philippines, Pakistan and Nepal. It therefore makes sense to consider using these programmes and their underlying delivery, payment and targeting systems where possible for AA, to improve the speed and efficiency of anticipatory activities. It can also promote government engagement in AA, as social protection programmes are typically government-run. However, despite these expected benefits, there are not yet examples of social protection programmes being successfully used for AA in the region, although some examples exist in Africa that may offer relevant lessons. It will be more feasible in countries with well-established social protection programmes and with updated beneficiary lists and digital payment systems. Analysis of the underlying social protection programmes and systems is vital before any decisions are made on using them for AA, to ensure the most at-risk and vulnerable communities are already included in programmes (or can be very quickly added), and that systems can deploy rapidly and reliably.

## What further work is needed on Building Block 2?

During the consultation for this Technical Standards Document, the following areas were identified as needing additional research or work:

- More guidance is needed on how to successfully deliver AA in a fragile or conflict-affected setting, for example when areas are inaccessible, or data is unavailable.
- Lessons from attempts to link AA with social protection need to be captured and guidance developed. There has been little consideration of how AA could be integrated with other shock-responsive systems, such as health response systems.
- More guidance is needed on AA M&E, particularly appropriate indicators and comparative assessments to enable benchmarking.

- Greater dialogue with national stakeholders is needed to ensure that AA is understood as part of a DRM and DRR cycle.
- More research is needed on the impact of cash, as opposed to other modalities for AA. Existing studies are all small-scale. There also needs to be improved understanding of how anticipatory cash and post-disaster cash transfers can interact to best effect.
- Further research would be useful into community-led AA actions, including community-led AA funds and community cash grants.
- More advocacy is required to ensure donors adopt a 'no-regrets' approach to AA, and that there is sufficient funding for AA preparedness, for example capacity strengthening and training.



## ANTICIPATORY ACTION BUILDING BLOCK Pre-arranged Finance

Because AA is activated on pre-agreed, risk-informed triggers, the finance has to be planned and arranged in advance so that sufficient money will be available when it is needed, without causing delays.

## What financing instruments can be used for AA?

Finance for AA has to be arranged in advance, or ex ante. Most disaster response is still funded through budget reallocations or humanitarian appeals, after the crisis has happened. These approaches are slow and unreliable, and do not build on global progress in risk information and forecasting. With AA, all the operations and finance have to be arranged in advance so that they can be reliably triggered, often within very short timescales. AA therefore relates to wider policy shifts and international debates towards more pre-arranged, triggered disaster financing, based on risk information. The figure below shows a range of pre-arranged, ex ante instruments, as well as the unplanned sources of funding that are typically used for disaster response but are not appropriate for AA.

There are four different types of pre-arranged financing instruments that can be used for disaster response:

- Budgetary instruments, such as reserve funds or contingent budget allocations. These come from domestic resources and are sometimes referred to as 'risk retention', as the government retains the responsibility to pay for the crisis, should it emerge. A specific budget line or reserve fund can be set up to trigger finance if certain conditions are met. Essentially, money is put aside and ring-fenced so that it does not get spent on other activities and will be available if needed.
- Donor contingent funding. These are similar to governments' budgetary instruments, in that they are funds, or pots of money that can be accessed under certain, pre-agreed conditions. However, the source of the funds is from international donors.

ANTICIPATORY ACTION IN ASIA AND THE PACIFIC

#### FIGURE 4

#### **Crisis Financing Instruments**



Source: Centre for Disaster Protection training materials (2022).

- Contingent credit. These are loans arranged in advance and the money is made available when a particular event occurs or pre-agreed thresholds are met, for example, when a state of emergency is declared. The loan is then paid back according to the pre-agreed terms.
- Insurance and other risk transfer instruments. 'Risk transfer' is where another party takes on the responsibility to pay if a disaster occurs or if particular thresholds are met, in exchange for up-front or regular payments. It is therefore the opposite of 'risk retention'. With insurance, an annual premium is paid to a provider, who commits to provide a payout should a disaster arise. Several market-based risk transfer products are now available, for example parametric insurance, where the payout is triggered based on a pre-determined index and set of thresholds, rather than based on a post-event assessment of losses.

Although all three pre-arranged financial instruments could be used for AA in theory, to date, donor contingent funding mechanisms have been the main method of paying for AA. Donor funding mechanisms have been successfully used for AA, where the funds are ring-fenced, with agreed triggers and thresholds for when and how the money will be released before the disaster strikes. There are also some examples of governments using budgetary instruments to support AA. Contingent credit and risk transfer instruments usually trigger when the disaster happens, not before. Theoretically, an AA loan could be agreed that would trigger before a disaster happens based on forecast information, if a government or organisation was willing - bearing in mind that the loan would have to be paid back. Similarly, an AA insurance policy could be designed to trigger before, rather than after, a disaster.

Sovereign parametric insurance for AA is being investigated, with some progress made in different regions, but not yet implemented in Asia Pacific. A recent UNICEF report states that 'parametric insurance instruments are now being tested in the region for anticipatory financing tools that could trigger financial flows to support near-term preparedness in advance of a disaster occurrence'.<sup>12</sup> More broadly, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Workplan 2021-2025 has called for progress on using risk transfer for climate hazards, and the ASEAN AA Framework specifically suggests using insurance from the Southeast Asian Disaster Risk Insurance Facility (SEADRIF) to replenish anticipatory contingency funds. However, despite an apparently conducive regional policy context, anticipatory insurance has not yet been implemented in the Asia Pacific region. In Africa, some progress is being made in using drought insurance, via the African Risk Capacity, to anticipate extreme lean seasons in some countries. Similarly, in the Caribbean, the Caribbean Catastrophe Risk Insurance Facility is working with WFP to investigate early triggers for their insurance, starting with setting up an anticipatory contingency fund that they hope will provide proof of concept.

Several factors mean that insurance and contingent credit may not be well suited to AA. One challenge for using insurance to respond to climate shocks can be cost – both parametric and indemnity insurance can be expensive, in comparison with other financing instruments.<sup>13</sup> Organisations purchasing policies will need to

assess the cost-effectiveness and value for money (VfM) of different instruments. VfM may be even more of a challenge for AA, as using triggers based on forecasts introduces more uncertainty, which would likely increase premium costs. As noted in the UNICEF report mentioned above, 'willingness to pay actuarially sound premiums has yet to be widely demonstrated',<sup>14</sup> and the climate risk pools operating in the region have faced challenges in building demand for their products generally. Also, contingent credit and risk transfer instruments, like climate insurance, usually involve larger amounts of money and are therefore more suited to less frequent, more severe hazards. This may be one of the reasons that they have not been used for AA previously, which has typically been done at pilot scale in the region. Also, they require high levels of trust in the forecasts and models, as well as considerable technical capacity (particularly for insurance).

Using donor contingent funding and budgetary instruments for AA has both benefits and challenges. The benefits of both are that they are relatively simple to set up, low cost and flexible; for example, they can be designed to incorporate different triggers and timing. However, it can be difficult to protect money that is set aside in funds for a disaster that may not materialise, particularly if there are other pressing needs. Reserving large amounts of government budget is often not possible politically, nor a costeffective use of funds. As a result, funds tend to be relatively small. Another challenge is that they can be difficult to replenish once depleted.

<sup>&</sup>lt;sup>12</sup> See p.78 of UNICEF (2023) East Asia and Pacific – Disaster Risk Financing and Social Protection: As Assessment of the Evidence on Pre-Arranged Finance for Government Support in Disasters, UNICEF.

<sup>&</sup>lt;sup>13</sup> See for example Meenan. C et al (2019) Disaster Risk Financing: A Toolkit, GIZ.

<sup>&</sup>lt;sup>14</sup> See p.76 of UNICEF (2023) East Asia and Pacific – Disaster Risk Financing and Social Protection: As Assessment of the Evidence on Pre-Arranged Finance for Government Support in Disasters, UNICEF.

## What funding sources are available now for AA?

There are now a number of dedicated global donor AA contingent funds, or AA windows within existing response funds, operated by different humanitarian agencies. The largest and most well-known are:

- The Anticipatory Action pilots of the Central Emergency Response Fund (CERF) – operated by UN OCHA
- Forecast Based Action by the Disaster Response Emergency Fund (DREF) – operated by IFRC
- AA window within the Special Fund for Emergency and Rehabilitation Activities (SFERA) – operated by the Food and Agriculture Organization of the UN (FAO)
- World Food Programme (WFP)'s AA Trust Fund. AA is also now eligible for funding from WFP's corporate Immediate Response Account, although this has not yet been activated.
- The Start Fund<sup>15</sup> operated by the Start Network.

In addition, there are smaller funds and regionalor country-level AA programmes run by individual NGOs and agencies.

**Despite increasing attention in international debates, a very small amount of funding is available for AA via these funds.** AA receives a very small proportion of the overall amount of crisis financing. This is a factor in preventing AA at scale. The CERF's AA pilots have been the largest source of funding for AA – for example, in 2020, USD 33.4 million<sup>16</sup> triggered from a rolling allocation of up to USD 140 million for anticipatory action, starting from 2019. Most of the other AA funds operate with less than USD 10 million per year.

AA has been funded primarily by humanitarian agencies and NGOs to date, rather than by governments or development actors. There are a few examples of governments using their own funding, either for AA or for supplementary activities (see below), but there are not yet strong examples where government has established their own triggered funds for AA in the region. This is also the case in other parts of the world, although some progress on developing the necessary legal and policy frameworks is underway in African countries including Mozambique, and in the Dominican Republic. Some development and climate-related organisations are beginning to work on AA, which could potentially open up other future sources of finance; for example, the Green Climate Fund (GCF) is working with the FAO and IFRC on systems strengthening for AA, and the World Bank is supporting some African countries to incorporate early warning satellite data to trigger anticipatory scale-up of social protection programmes. The Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) of the European Commission has established AA Crisis Modifiers, which enable existing programmes to pivot in a forecast disaster situation and receive additional budget.

There are some notable exceptions, where governments are beginning to invest their own resources in AA. Some initial progress with government funding of AA has occurred in countries, such as:

- the Philippines:<sup>17</sup> the government has been making policy and legislative changes to enable local government to access their Quick Response Fund on the declaration of an imminent disaster, i.e., ahead of a shock. In 2021, several local government units in the Philippines used their preparedness funding to procure Shelter Strengthening Kits as part of AA.
- Mongolia: FAO will provide cash transfers to households to allow them to purchase fodder at reduced government rates, to ensure their livelihood is protected during dzud. The 50 percent discount on hay and fodder was authorised by the Minister of Finance and will come from the state emergency reserve fund.

<sup>&</sup>lt;sup>15</sup> Start Network's Annual Review 2020 states that the Start Fund disbursed 11 percent of its overall £16.3 million before the crisis occurred.

<sup>&</sup>lt;sup>16</sup> From CERF's Annual Results Report 2020.

<sup>&</sup>lt;sup>17</sup> See Anticipation Hub (2021) How Local Government Allocated Funding for AA in the Philippines.

### When is funding needed for AA?

It is important to recognise that different funding arrangements are needed for different stages of AA, including both triggered and on-going funding. As mentioned in the section on Building Block 2, AA is typically split into preparedness and activation phases, that are separately triggered. These two phases will both require some finance - typically, a smaller amount of finance is triggered for the preparedness phase, with a larger amount released for the full activation if the thresholds are met. However, AA also requires on-going resourcing for system strengthening, whether or not protocols are activated - for example, to pay for training, monitoring triggers, evaluations, testing, building delivery mechanisms and conducting simulations. This finance does not need to be triggered, as it instead relates to ongoing routine costs.

Unfortunately, donors are often not willing to provide all types of funding (triggered funding for both readiness and activation, as well as routine funding for system strengthening). Donors are sometimes willing to pay for activation but not preparedness, or they may only be willing to provide funding that can be triggered for the forecast emergency, rather than financing the underlying system. For example, sometimes donors do not have the necessary regulations in place to disburse funds at the preparedness stage. This creates difficulties for implementers, who ideally need coherent and integrated funding for all elements of AA. Implementing agencies, particularly local organisations, can struggle to access the money they need for ongoing preparedness and capacity building.

**Triggers and thresholds for finance and activities need to be aligned.** If the finance has different triggers from the activities, this can introduce a risk that money will not be available when needed, or that activities will be triggered but the organisation will not be reimbursed for them. This scenario was encountered in the CERF AA pilots by organisations who were using different local thresholds from the triggers and thresholds selected by OCHA.

Organisations should consider how long finance will take to move through their systems and build this into the trigger timescales. For example, if it takes 48 hours for the AA finance triggers to be activated and for the money to move through different accounts, before it can be released to implementing partners to respond to an imminent typhoon, this will drastically reduce the time available for anticipatory activities.

Triggering all funds at the preparedness stage and then holding them locally and repaying if they are not used can help in this regard – for example, WFP Country Offices work on this basis. Larger organisations may expect local implementing agencies to finance AA themselves and then be reimbursed; for example, CERF AA funding is released after the activation. With this kind of arrangement, organisations may feel confident to finance AA themselves, knowing that the money will come as it has been pre-approved; but for smaller organisations it can be a challenge to make sure internal funds are available when needed, until they are reimbursed.

## Lessons learned for financing AA

Different sources of finance for AA are required to reach sustainability and scale. AA funding primarily comes from the humanitarian sector, which is under increasing pressure to cover more humanitarian need with decreasing amounts of aid. Compared with other types of crisis financing, AA funding is very small scale. Incorporating AA into development and climaterelated programming may help to bring in different actors and diversify funding sources. Crisis risk modifiers, with anticipatory triggers, may be a useful approach. Using a broader range of financing instruments for AA (for example, insurance) could also increase scale and remove common problems with replenishment.

AA is ideally government-led, utilising national systems and budget – this is likely to require prior legislative, procedural and policy change. In many countries, amendments to the public

financial management, legislative and policy environments will be required to facilitate AA, as well as an increase in political will, technical capacity, and trust in forecasts. Different approaches are possible; for example, a National Disaster Response Fund could be amended to be accessible pre-disaster, or a contingent line could be added to a social protection programme budget. Different national stakeholders will need to be involved depending on which approach is taken, and it can be resource-intensive to change existing processes and protocols, as well as shift mentalities that are fixed on ex post disaster response. Handing AA over to government for long-term sustainability should be the aim of humanitarian agencies, but this is timeconsuming, and needs to be planned for it to actually happen, taking into consideration the political economy and incentives of different actors.

It is key to involve national finance stakeholders. Often, agencies involved in AA omit to include representatives from the Ministry of Finance or Treasury in discussions, as they have more established connections with different parts of government – for example, national hydrology and meteorological services, Disaster Management Agencies or Social Welfare departments – and lack the necessary political connections to collaborate with the Ministry of Finance. However, this is essential to set up or adapt contingency funds, or investigate options for government insurance.

## What further work is needed on Building Block 3?

During the consultation for this Technical Standards Document, the following areas were identified as needing additional research or work:

- Governments want more information and evidence on the cost-effectiveness of AA in their country, for example, on the potential return on investment, compared with response and comparative analysis of the costeffectiveness of different types of anticipatory activity.
- Some organisations, including IFRC and the Start Network, have begun to explore how pooling funds for AA could enable more risks to be covered. This should be investigated further, particularly at national level, to understand the benefits and opportunities it could create.

- More guidance is needed on how AA operations and financing can be co-designed to maximum benefit.
- Greater understanding of the political economy of AA is needed, for example government incentives and how these can be shaped to increase the likelihood of ownership and funding.
- Guidance on the necessary public financial management capacities and processes for AA is currently missing, particularly given the different capacities of countries in the region.

### Links to relevant learning resources

Many documents have been referenced throughout this document. In addition, the following non-exhaustive list of resources has been curated to provide recent learning across the building blocks.

- Anticipation Hub: Key lessons learned by the Anticipatory Community over the years of implementing Early Warning and Early Action projects from around the globe
- Centre for Disaster Protection: Learning from Anticipatory Action with UN OCHA
- FAO: Adopting anticipatory action and shock responsive social protection to strengthen disaster preparedness and resilience: Learning from the ASEAN region
- IFRC: FbF Practitioners Manual
- OCHA: Anticipatory Action Resources
- REAP: Finance for Early Action Tracking commitments, trends, challenges and opportunities
- START: Sector wide review of monitoring, evaluation and learning methodologies for forecast-based action

#### **Contact details**

#### **Catherine Jones**

Co-lead of the Asia-Pacific Technical Working Group on Anticipatory Action & Anticipatory Action Lead for Asia-Pacific (FAO)

#### Catherine.Jones@fao.org

#### **Raymond Zingg**

Co-lead of the Asia-Pacific Technical Working Group on Anticipatory Action & Regional Anticipatory Action Coordinator for Asia-Pacific (IFRC)

Raymond.Zingg@ifrc.org



Funded by European Union Humanitarian Aid

This publication was made possible through the financial support of the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) as part of the Pilot Programmatic Partnership between FAO and DG ECHO. The contents of this publication can in no way be taken to reflect the views of DG ECHO. The European Commission is not responsible for any use that may be made of the information it contains.