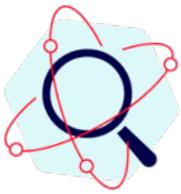


# Minimizing loss and damage through anticipatory action: how the climate and development community can help to bring this approach to scale



## Losses and damages are already being experienced

The science is clear: we are not mitigating climate change or adapting to its impacts quickly enough. The Sixth Assessment Report by the Intergovernmental Panel on Climate Change ([IPCC 2022](#)) revealed that nearly half of humanity is now living in places that are highly vulnerable to climate impacts. The report also laid out the scale of these impacts and the widespread losses and damages people and countries are experiencing around the world (see Box 1). As temperatures have risen, so have the frequency and intensity of extreme events. Many countries are now facing new, different and more intense climate-related impacts than they have ever seen before, and in some instances, they are facing limits to their capacity to adapt.

Some of the most severe climate-related losses and damages on record occurred in 2022. The devastating floods in Pakistan submerged one-third of the country in water and caused families to lose their homes and loved ones and negatively affected 33 million adults and children. The worst drought in more than four decades, after an unprecedented four failed rainy seasons in the Horn of Africa, killed millions of livestock, destroyed crops, and resulted in 22 million people at risk of starvation with 1.1 million people migrating in search of food and water this year.

Humanitarian agencies such as the Red Cross Red Crescent Movement are collaborating with local actors to provide emergency response and temporary assistance in the aftermath of disasters and to support measures for the safe and dignified migration for people experiencing climate-induced displacement and planned relocation. While humanitarian action is important for saving lives, it only can deal with responding to a small part of losses and damages. Funding for such activities typically comes from appeals and donations.

Yet, as the climate crisis worsens, the humanitarian system will become increasingly overstretched. It is not set up or funded to deal with rising risks of the scale we are beginning to see. A recent study by Oxfam estimates that the average funding for UN humanitarian appeals

### Box 1. What is Loss and Damage?

While the United Nations Framework Convention on Climate Change (UNFCCC) has not formally defined Loss and Damage, it is generally understood to refer to climate change impacts which cannot be avoided by mitigation, adaptation and 'classic' disaster risk management (e.g., strengthening flood defences, changing building codes, defining evacuation pathways). It includes climate change impacts from **rapid-onset events** (e.g., floods, storms) and **slow-onset events** (e.g., desertification, sea-level rise) and refers to **economic losses** (e.g., loss of income and physical assets) and **non-economic losses** (e.g., loss of life, loss of biodiversity, land degradation). The IPCC defines 'losses and damages' in lower case as (observed) impacts and (projected) risks from climate change. The capitalized 'Loss and Damage' refers to political debates and activities under the UNFCCC following the creation of the Warsaw International Mechanism for Loss and Damage in 2013.

linked to extreme weather over the past five years was only 54 per cent, resulting in an estimated funding shortfall of 28–\$33 billion US dollars ([Oxfam 2022](#)). As climate change intensifies, so do humanitarian needs. The International Federation of Red Cross and Red Crescent Societies (IFRC) estimates that by 2050, over 200 million people will need international humanitarian aid because of climate change – nearly twice the estimated 108 million people who need help today. In short, climate change is putting further stress on a system that is already hugely under-resourced and oversubscribed ([IFRC 2019](#)).

Behind these numbers lies the harsh lived reality of loss and damage: people losing their homes and loved ones; people experiencing hunger, and mental and physical harm; and entire communities being forced to leave their homes as their land becomes uninhabitable, or is lost in the rising sea.



## Learning from humanitarians: how to minimize losses and damages via anticipatory action

There is some good news, however. Even though we are in a crisis, we can still reduce the impacts of climate change. Technical progress in recent decades has enabled prediction with increasing accuracy of the timing and location of extreme weather events such as hurricanes, droughts and floods. This gives us time to act **before** an extreme event turns into a disaster, thereby minimizing losses and damages.

Pressured by the climate crisis, and building on decades of experience in supporting people prepare for and deal with disasters, humanitarian agencies developed anticipatory action to save lives, livelihoods and in this way help to minimize the incurrence of losses and damages (see Box 2).

### Box 2. Key characteristics of anticipatory action

Anticipatory action takes different forms, depending on the mandate, the context, the hazard that people are facing, and the available forecasts. There are parameters common to all forms, however, which include:

- the actions are taken **before** a hazard turns into a crisis or disaster
- the activities undertaken are **preventative**
- the decision to act is based on a **scientific prediction or forecast**, and/or collaborative risk analysis

This approach seeks to minimize losses and damages by enabling relevant actors, especially affected communities, to act ahead of a potentially harmful event, instead of having to respond to it. Anticipatory action approaches typically link robust forecasts and risk analysis to action plans, and are ideally supported by a prearranged financing agreement. The action plans are prepared well in advance and clarify who does what, when and how. They are set in motion when critical forecast thresholds known as triggers are reached.

The activities undertaken ahead of a shock to reduce negative impacts on lives and livelihoods are often referred to as anticipatory actions or early actions. They take different forms and vary across context, hazard and the forecast to which they are tied. Among others, they can include providing cash so that people do not need to sell income-generating assets such as their livestock, distributing shelter strengthening kits so that people can prepare their houses ahead of a storm and providing measures to safeguard livelihoods, such as evacuating livestock to safe areas (see Box 3).

### Box 3. Acting early to prevent losses and damages in Bangladesh

Bangladesh is one of the world's most disaster-affected countries. It is highly exposed to severe monsoon flooding and cyclones, among other hazards. On 4 July 2020, a high probability of severe flooding was forecast for mid-July along the Jamuna River, with one-third of the area's total population likely to be affected. That warning was the trigger for the UN to immediately release 5.2 million US dollars from the Central Emergency Relief Fund to the Food and Agricultural Organization (FAO), the United Nations World Food Programme (WFP) and the the United Nations Population Fund (UNFPA) to enable them to prepare to distribute items to help communities urgently prepare and protect themselves.

On 11 July, the activation trigger was reached when forecasts predicted the floods would reach critical levels in five days. At this point, aid workers began distributing the aid. Working alongside the government, staff from the Bangladesh Red Crescent Society, the IFRC and non-governmental organizations, the three UN agencies and their implementing partners began providing at-risk communities in Bogura, Gaibandha, Kurigram, Jamalpur and Sirajgonj districts with the means to protect themselves and their livelihoods from the worst effects of the flood.

Anticipatory actions included:

- the distribution of sealable drums in which farmers could safely store their seeds and farming tools
- the distribution of hygiene kits, dignity kits and health kits to 15,000 women and girls and members of the transgender community, providing them essential sexual and reproductive health supplies
- cash assistance (53 US dollars) to almost 20,000 households (around 100,000 people) via mobile banking, which allowed families to protect themselves from the floods and build their resilience in the way that they chose

Some 220,000 people were reached **before** the flood peaked. Evidence gathered during the activation and through subsequent research showed that this form of collective anticipatory action at scale is possible and works. More people were reached, earlier and faster, and at half the cost of a comparable rapid response.

Source: [OCHA 2020](#) 

The Anticipation Hub hosts a **database of the different anticipatory actions**  used for various hazards. These activities are typically developed in collaboration with local actors and communities to ensure that they are tailored to local needs and reach the most vulnerable people.

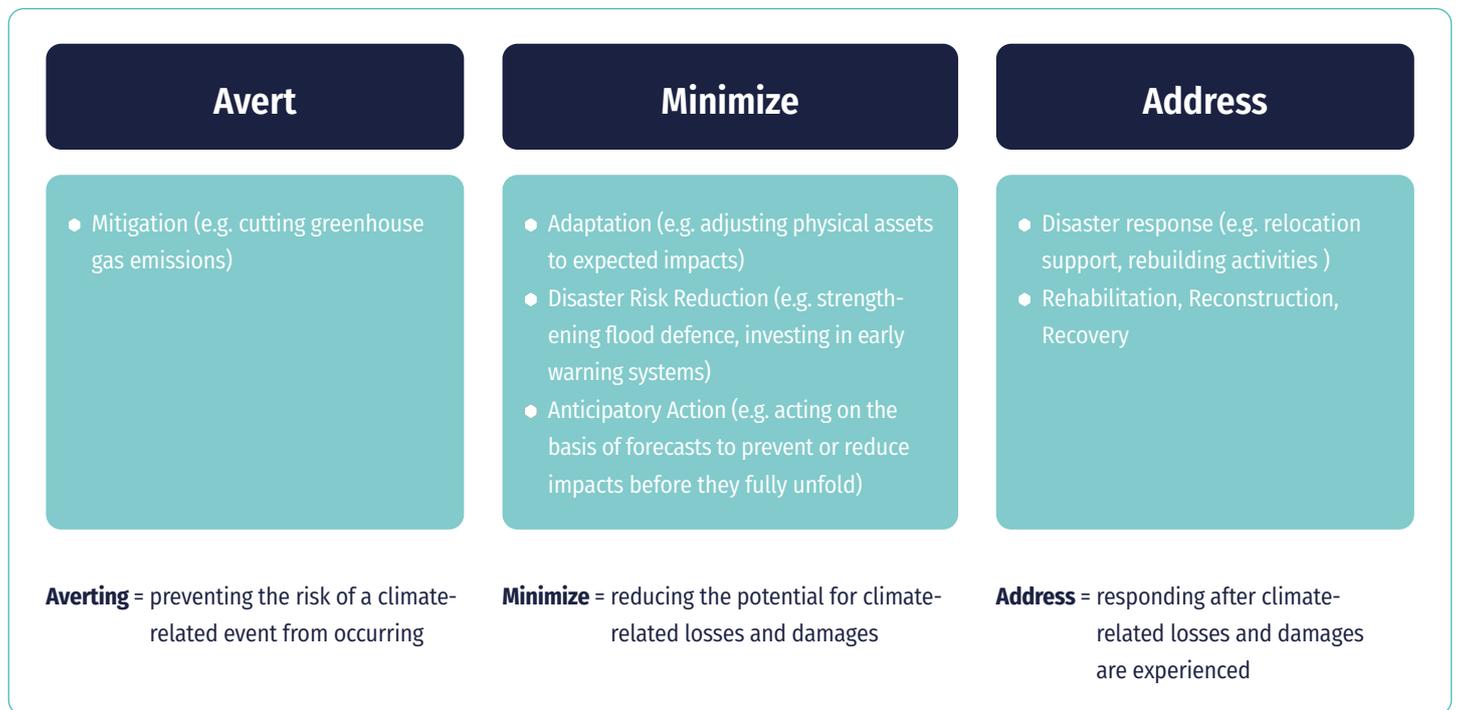


## Situating anticipatory action within loss and damage

Anticipatory action approaches can **help to minimize both economic and non-economic** climate-related loss and damage. Figure 1 illustrates how these two concepts are related.

It is important to note that anticipatory action approaches are not a suitable way to minimize all climate-related loss and damage. They are generally most suitable for rapid onset events. Anticipatory approaches exist for a range of hydrometeorological events, including extreme storms, floods, heat waves and droughts. They are suitable for events that are infrequent in their occurrence, and not suitable for slow onset events such as desertification or sea level rise. Given this limitation, anticipatory action approaches are one instrument in a larger toolbox for dealing with climate-related losses and damages.

**Figure 1. The relevance of anticipatory action to Loss and Damage**



Volunteers of the Philippine Red Cross strengthening houses during a simulation exercise.  
© Anticipation Hub



## The potential of anticipatory action to minimize losses and damages: experience and evidence

The humanitarian community started to develop anticipatory action in 2013. What started as pilot projects in Togo and Uganda is now an approach that is increasingly being mainstreamed across the humanitarian sector. **It is now being implemented in over 70 countries** [↗](#) by the Red Cross Red Crescent Movement, the Start Network, WFP, FAO and OCHA, among others.

The evidence of its potential is compelling. Firstly, **anticipatory action saves lives and livelihoods** ([WFP 2020](#) [↗](#)). For example, in Bangladesh in 2017 and 2020, recipients of anticipatory cash were more likely to evacuate their families and livestock before floods, and less likely to borrow money to cope with the impacts ([BDRCS 2021a](#) [↗](#); [Pople et al. 2021](#) [↗](#); [Gros et al. 2019](#) [↗](#)). Due to early warnings, they were also able to safeguard essential equipment such as tools, fishing equipment and pumps. And in 2019/20, vulnerable herder households suffering extreme winter conditions (dzud) in Mongolia received unconditional cash and animal-care kits from the Mongolia Red Cross Society and FAO. Likelihood of households selling valuable assets was 17 per cent less for those receiving such packages from the Mongolia Red Cross Society and 43 per cent less for those receiving FAO packages (FAO and IFRC, forthcoming). Actions during a previous dzud in 2017/18 saw households that received anticipatory assistance lose 50 per cent fewer horses than comparison households ([Gros et al. 2020](#) [↗](#)).

An increasing number of studies show that **anticipatory action helps to preserve people's dignity**. In Senegal in 2019, during a six-month anticipatory action project to support communities at risk from drought, the number of households reporting going a whole day without eating reduced by 19 per cent ([Start Network 2020](#) [↗](#)). During Cyclone Amphan in Bangladesh in 2020, beneficiaries of the Bangladesh Red Crescent Society's anticipatory actions reported better conditions at evacuation shelters, including increased access to water (+20 per cent), hand sanitizer and COVID-19 masks (+29 per cent) and light (+13 per cent) ([BDRCS 2021b](#) [↗](#)). These improvements occurred due to efforts to adapt anticipatory action plans in light of the COVID-19 pandemic.

There is also evidence that **anticipatory action provides value for money**. In Ethiopia, for every 1 British pound (GBP) that the Start Network spent on anticipatory action ahead of drought, recipients realized an average of 2.58 GBP more benefits from maintained income and the health and stock of their livestock than they would have if they had only received the standard humanitarian response ([Atkinson 2018](#) [↗](#)). Similarly, FAO estimates that for every US dollar spent on cash and animal care kits prior to the 2017/18 dzud in Mongolia, recipients received benefits worth 7 US dollars ([FAO 2018](#) [↗](#)).

The potential and growing evidence have helped to drive significant policy achievements, including two UN Resolutions ([A/RES/74/218](#) [↗](#) and [A/RES/72/132](#) [↗](#)), the Group of Seven (G7) [Famine Compact](#) [↗](#), the [G7 Foreign Ministers' Statement on Strengthening Anticipatory Action](#) [↗](#), and the Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) [Guidance Note on Disaster Preparedness](#) [↗](#), which all call on Member States to strengthen anticipatory action. The [European Union \(EU\) Adaptation Strategy](#) [↗](#) that was adopted in early 2021 also encouraged mainstreaming anticipatory approaches in relevant EU policies and instruments for external action.



Volunteers of the Bangladesh Red Crescent Society supporting affected communities during a simulation exercise.  
© Anticipation Hub



## How to scale up anticipatory action: the role of the climate, development and humanitarian communities

Despite these encouraging developments, only a limited number of people and hazards are being covered by anticipatory action due to lack of access to effective climate and weather forecasts, limited government uptake, lack of available finance and other factors. As anticipatory action has significant potential to minimize losses and damages from ever-increasing climate change impacts, the climate, development and humanitarian communities should collaborate to ensure that communities least responsible for climate change don't need to 'pay the bill' through negative life and livelihood impacts. They can do so by bringing anticipatory action to scale through the following actions:

### 1. Support anticipatory action through the Santiago Network and the Global Shield against Climate Risks

Due to its potential for minimizing losses and damages, anticipatory action should be integrated into the work plan of both the programming and financing levels of the **Santiago Network on Loss and Damage** [\[1\]](#). The Santiago Network aims to catalyse technical assistance to developing countries that are particularly vulnerable to the adverse effects of climate change. As such, it is well placed to mobilize technical and financial resources to scale up anticipatory action and thus further contribute to the five-year rolling work plan (2023-2027) of the **Executive Committee of the Warsaw International Mechanism** [\[2\]](#).

For programming, this would imply catalysing investments in capacities that inform anticipatory action at national and local levels, and encouraging the collaborations and policies that are needed to make anticipatory action an integral part of disaster risk management structures and climate adaptation frameworks such as National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) (see also **de Perez 2022** [\[3\]](#)).

For financing, the Santiago Network could provide a forum to advocate for expediting the work under way to reform global climate finance processes and disaster risk financing architecture. This could involve increasing the share of financing that is channelled to local actors and implementing agencies on the ground, easing funding accreditation processes, speeding up disbursement processes and supporting actors in accessing funds (**Anticipatory Action Task Force 2022** [\[4\]](#)).

An example of such an initiative that is outside the UNFCCC process is the G7-V20 (Vulnerable Twenty Group) proposal for the COP27 launch of the Global Shield against Climate Risks (**G7 and V20 2022** [\[5\]](#)). The Global Shield aims to provide and facilitate more and better pre-arranged protection against climate and disaster related risks through a more coherent technical and financing support structure. The Global Shield could enable both countries and humanitarian agencies to direct resources where they are needed most: in the countries and communities on the frontline of the climate emergency. Doing so requires employment of direct access modalities by its underlying financing vehicles (e.g. reformed Global Risk Financing Facility, reformed Insu-Resilience Solution Fund, and CVF-V20 Joint Multi-Donor Trust Fund). Given the scope of the Global Shield to look beyond insurance solutions, it should provide financial and technical assistance to build anticipatory action systems, for example by opening windows to finance the building of in-country systems for anticipatory action. Moreover, to ensure the Global Shield is based on needs, its governance structure should foster ownership from developing countries and partner with humanitarian agencies and the disaster risk reduction community.

### 2. Provide clearer, more understandable and actionable climate- and weather-related forecasts to frontline communities

Robust forecasts of hazard impacts are an essential element of anticipatory action. Forecasts are what triggers anticipatory action to avert and minimize losses and damages. This requires investments in early warning systems and other predictive alerting tools.

The climate and hydrometeorological community has made great strides over the last few years in expanding the range of forecasts, and in investing in early warning systems. At COP26, the World Meteorological Organization, the UN Development Programme and the UN Environment Programme established the Systematic Observations Financing Facility as a funding mechanism to improve earth system observations and monitoring, with a focus on least developed countries (LDCs) and Small Island Developing States (SIDS). The Climate Risk Early Warning Systems Initiative is an operational pooled financing mechanism with a focus on predictive and warning capabilities in SIDS and LDCs. Other climate funds, such as the Green Climate Fund and the Adaptation Fund, are funding various activities to strengthen national forecasting capacities.

However, while investment in technical forecasting capacity is vital for an effective early warning system, it is only one part of the process. Some of the most extreme events over the last decade were predicted and had warnings issued but still caused devastation when those at risk were unable to act upon those warnings. Forecasts preceded

cyclones Idai and Kenneth in March and April 2019, but they devastated Mozambique, Malawi and Zimbabwe, causing over 1000 deaths, 2.6 million people in need of humanitarian assistance and at least USD 1 billion in damages. According to research by the Zurich Flood Resilience Alliance ([IFRC 2020b](#)), the loss of life could have been reduced if there had been better uptake and understanding of the actions that were needed, as well as better flood forecasting.

Forecasts need to speak to those minimizing and addressing loss and damage. They should be explicit in what this means for each given location regarding the specific impacts of the hazard on people and infrastructure. In the case of flooding, that means not just the amount of rain but which areas might be flooded and how many people will be affected. These impact-based forecasts provide detailed information on who or what is exposed and vulnerable to the particular hazard, so that government agencies, humanitarian agencies and first responders can act and support those most at risk as quickly as possible (see also [Golding 2022](#)).

In addition to greater investment in technical forecasting capacity (e.g., in exposure, vulnerability and exposure data), this requires better risk communication. Involving local actors and at-risk communities helps ensure that the forecasts reach the ‘last mile’ by being clear, understandable and actionable. Communities can be engaged in data collection (e.g., water level monitoring and exposure and vulnerability mapping) and can provide guidance on needed items in forecasts (e.g., lead times) and suitable technologies for communicating warnings. Assessments of the usability, effectiveness and benefits of forecasts and warnings for enabling early action by communities should be jointly designed and implemented by national hydrometeorological services, humanitarian, government and non-governmental actors. This will help feed the continuous process for improving forecasts to better meet user needs. In addition, local institutional capacities and skills of local responders can be used to strengthen and complement local government capacity for ‘last-mile’ warnings that enable anticipatory action.

To facilitate such coproduction, and to bridge the spheres of science, policy and practice, the climate and development community should invest more in programmes and projects that include the requirement for codevelopment, knowledge transfer and capacity strengthening for local actors (e.g., universities, hydrometeorological services, government agencies).

### 3. Support the mainstreaming of anticipatory action into national climate and disaster risk management frameworks

As with a ‘classic’ emergency response to address losses and damages, preagreed plans and adequate operational capacities and processes are essential for the effective implementation of anticipatory activities to minimize losses and damages. People may be well aware of a threat and want to act but cannot do so because they lack knowledge of what to do or lack ability or funds to take the recommended steps. Building the institutional policy, strategy and plan frameworks and the operational capacity to act upon forecasts is therefore essential. Who will do what, when and how needs to be clear in order to mitigate disaster losses and protect at-risk communities, assets and critical infrastructure.

National governments, donors and international agencies should do more to lay the foundations for implementing anticipatory action. At the national level, this requires coherent legal and policy frameworks, such as disaster risk management acts, national plans on disaster management or risk reduction, hazard- or sector-specific plans, and standard operating procedures for once a forecast indicates the occurrence of loss and damage. Such frameworks should clarify roles and responsibilities such as who will issue the forecast and who will provide the authorisation to act. They should also establish clear and transparent criteria for disbursements and processes to ensure that funds are channelled to those who need them when they need them. These frameworks need to be aligned with relevant climate policy frameworks (e.g., NAPs, NDCs).

National governments, for instance, should review relevant disaster risk management acts, policies and plans to check if they enable and support the implementation of anticipatory action and if they specify relevant institutional responsibilities and processes. The implementation of anticipatory action does not necessarily have to be the responsibility of national disaster management authorities. It can be delivered through different line ministries, agricultural extension services, social protection schemes, local administrators or humanitarian partners, to name a few. Mainstreaming anticipatory action is a cross-sectoral task. Coordination between different ministries, agencies and platforms engaged in climate change adaptation and disaster risk reduction at national and sub-national levels is crucial for achieving effective and context-specific integration.

Governments should also pay attention to whether these DRM acts, policies and plans is being effectively implemented. The adoption of a strategy does not automatically lead to action, particularly at the local level. In resource-constrained settings, governments may lack the financial capacity, technical capacity, physical infrastructure or other practical capabilities to effectively execute anticipatory action.

Donors and international agencies such as development agencies and climate and development finance institutions should support efforts to create an enabling environment for minimizing losses and damages. Examples of doing this include mobilizing and providing necessary technical and financial resources and encouraging collaboration. The Santiago Network provides an excellent entry point for achieving this.

## 4. Fund anticipatory action by making climate and disaster risk finance more accessible to local actors and humanitarian agencies

Funding toward anticipatory action is steadily increasing ([REAP 2022](#)) but remains significantly insufficient. Anticipatory action approaches so far have been financed mostly through humanitarian budgets, with Germany as the main funder. A growing number of other countries and actors are also now offering support for anticipatory action initiatives, but that funding is often earmarked for specific countries or activities. Pledges made at high level events throughout 2021 totalled at least 700 million US dollars. Despite this being an encouraging development, the sum is still far too small for what is needed. For example, contingent loans from multilateral development banks can be around 500 million US dollars for a single country. Anticipatory action continues to receive only a very small proportion of the overall amount of climate and disaster risk financing. As this can be attributed to fragmentation and lack of understanding between the climate, development and humanitarian communities, collaboration and division of work across sectors would be helpful.

The international climate and development community could also increase access to financing for the ‘system-building’ aspect of anticipatory action approaches. This could involve financing the improvement of early warning systems such as datasets, trigger/threshold development and risk communication as well as local level capacity strengthening such as to support development and improvement of legal and operational capacities. Existing good examples include the Green Climate Fund working with the IFRC to strengthen systems for a particular approach to anticipatory action called forecast-based financing and the Global Risk Financing Facility working with civil society organizations to strengthen anticipatory action.

But the barriers for humanitarian and local actors to access such funds are high. Easing eligibility criteria and speeding up disbursement processes are one way to catalyze climate action. Another, more ambitious route would be to provide financing through a dedicated Loss and Damage financing facility, or a dedicated financing window for Loss and Damage under existing funds.

Governments have a mandate and a duty to protect their citizens from disaster impacts. Anticipatory action is an approach that enables governments to act before a predictable shock to minimize its disastrous impacts. When possible, national and local governments should directly finance anticipatory action themselves. Disaster risk finance instruments such as insurance, national budget allocations, contingent credit and contingency funds could be tailored to help ensure that this financing is available to support anticipatory action. For contexts in which doing so will not be possible, international financing should be provided to enable system-building as well as ‘fuel money’ to pay for the implementation of agreed activities before an imminent disaster.

### Box 4. About the Anticipation Hub

The Anticipation Hub is a platform to facilitate knowledge exchange, learning, guidance and advocacy around anticipatory action. It is hosted by the German Red Cross in cooperation with the IFRC and the Red Cross Red Crescent Climate Centre, with funding from Germany’s Federal Foreign Office.

For more information, please visit the [Anticipation Hub](#).

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