

# InsuResilience Sectoral Community Linking Anticipatory Action to Risk Financing

## Compendium of Think Pieces by Members

Published by



InsuResilience  
GlobalPartnership



Risk-informed  
Early Action  
Partnership



Anticipation  
Hub



# **InsuResilience Sectoral Community**

## **Linking Anticipatory Action to Risk Financing**

### **Compendium of Think Pieces by Members**

#### **Editors**

Emma Flaherty (REAP Secretariat), Lea Sarah Kulick (InsuResilience Secretariat),  
Nikolas Scherer (Anticipation Hub), Swenja Surminski (LSE)

#### **Authors**

Susanna Acland, Tara Chiu, Markus Enenkel, Anna Farina, Emma Flaherty, Jonathan Gascoigne,  
Sophie Javers, Jenty Kirsch-Wood, Sarah Klassen, Soenke Kreft, Theresa Lederer, David Maslo,  
Magdalena Mirwald, Imogen Outlaw, PCRIC, Jennifer Phillips, Matthias Range, Nikolas Scherer,  
Daniel Stadtmüller, Swenja Surminski, UNDRRR, Ben Webster, Barnaby Willitts-King, Constance Wong

#### **Acknowledgements**

Many thanks to the members of the Sectoral Community on Linking Anticipatory Action with  
Risk Financing for their contributions to this compendium via the think pieces and for active participation  
in the related discussions during the online meetings throughout 2022.

# Content

## Introduction

Summary note on insights gained through the Sectoral Community	4
--	---

## Workstream 1 Guiding Questions

What are barriers and opportunities for the risk financing community to scale up Anticipatory Action?	11
---	----

Q 1 a What common principles guide the development of anticipatory action?	12
--	----

First contribution: Tara Chiu, Sophie Javers (University of California Davis)	13
---	----

Second contribution: Emma Flaherty (REAP Secretariat), Nikolas Scherer (Anticipation Hub)	14
---	----

Q 1 b What are obstacles and bottlenecks for scaling up anticipatory action?	16
--	----

First contribution: Global Risk Analysis and Reporting Section of the United Nations Office for Disaster Risk Reduction	17
---	----

Second contribution: Sarah Klassen (Start Network)	19
--	----

Third contribution: Tara Chiu (University of California Davis)	20
--	----

Fourth contribution: Ben Webster (REAP Secretariat)	22
---	----

Q 1 c What sources of funding & instruments are available in the CDRFI community and the private sector that could help to provide financial coverage for AA preparedness/readiness expenses?	24
---	----

First contribution: Jonathan Gascoigne (Centre for Disaster Protection)	25
---	----

Q 1 d How can regional risk pools better incorporate anticipatory action?	28
---	----

First contribution: David Maslo (African Risk Capacity)	29
---	----

Second contribution: Pacific Catastrophe Risk Insurance Company (PCRIC)	32
---	----

Third contribution: Constance Wong (Willis Towers Watson)	33
---	----

Fourth contribution: Theresa Lederer (RMS / Vivid Economics)	35
--	----

Fifth contribution: Markus Enenkel (Harvard Humanitarian Initiative), Nikolas Scherer (Anticipation Hub)	36
--	----

Q 1 e What are the top 3 most promising technologies/solutions to scale up risk financing for anticipatory action?	38
--	----

First contribution: Susanna Acland, Barnaby Willitts-King (GSMA Mobile for Humanitarian Innovation)	39
---	----

Second contribution: Tara Chiu, Sophie Javers (University of California Davis)	41
--	----

## Workstream 2 Guiding Questions

What are opportunities to overcome siloed approaches and align different CDRFI & AA initiatives?	43
--	----

Q 2 a How can we move donors from supporting instruments and programmes towards financing a more integrated 'strategy' at the country level?	44
--	----

First contribution: Theresa Lederer (RMS / Vivid Economics)	45
---	----

Second contribution: Anna Farina (Start Network)	47
--	----

Q 2 b How can we ensure alignment and complementarity of different CDRFI instruments across the DRM continuum?	49
--	----

First contribution: Magdalena Mirwald, Jennifer Phillips, Soenke Kreft (Munich Climate Insurance Initiative, MCII)	50
--	----

Second contribution: Anna Farina (Start Network)	52
--	----

Third contribution: Jonathan Gascoigne (Centre for Disaster Protection)	53
---	----

Q 2 d How can the risk reduction effects of AA be recognized in the design and pricing of CDRFI instruments?	55
--	----

First contribution: Jenty Kirsch-Wood (United Nations Office for Disaster Risk Reduction)	56
---	----

Second contribution: Swenja Surminski (London School of Economics), Daniel Stadtmüller (InsuResilience Secretariat)	58
---	----

Q 2 e How can AA supported by CDRFI, and incorporated in risk analytics, reinforce longer term risk management and development planning at a national level?	60
--	----

First contribution: Matthias Range, Imogen Outlaw (GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit)	61
---	----

Second contribution: Sophie Javers, Tara Chiu (University of California Davis)	63
--	----



## Introduction

# Summary note on insights gained through the Sectoral Community

## Background: Better together

Over the past decades, a suite of new Climate and Disaster Risk Finance and Insurance (CDRFI)<sup>1</sup> tools has been generated across the development, the humanitarian and the private sector. Examples include index-based insurance, catastrophe bonds, forecast-based financing, pooled funds and many other innovations. Unfortunately, these innovative instruments have often been implemented largely in isolation of each other. Most of them are not integrated in comprehensive disaster risk financing strategies or linked more systematically to recent humanitarian efforts to scale anticipatory action (AA). They all serve different purposes, address different target groups and are based on different modalities – which has its advantages but also results in untapped

potential, a loss of synergies, and risks leaving behind those who need the financing the most.

In March 2021, the Anticipation Hub, the InsuResilience Global Partnership (IGP) and the Risk-Informed Early Action Partnership (REAP) teamed up to launch the “Sectoral Community on Linking Anticipatory Action to Risk Financing”. The objective of the Sectoral Community (SC) is to bring together the development & humanitarian sector, public & private actors, civil society actors, researchers and think tanks to exchange experiences and share ideas on how various CDRFI tools and anticipatory action can be better integrated.

## Insights from the kick-off workshop

Following an inception phase, where TORs for the SC were drafted, the SC gathered in September 2021 for the official kick-off workshop “Linking Anticipatory Action to Risk Financing”. The objective of this workshop was to bring this new community to life and start the conversation by establishing interests and needs, identifying initial opportunities and challenges for cross-sectoral collaboration and mapping out the next steps for the community. More than 50 participants joined the workshop and welcomed the joint initiative by highlighting, amongst other aspects, the need to:

1. Clarify concepts and come to a joint understanding and terminology
2. Break silos, and work across sectors and organizations to advance the application of CDRFI instruments to AA

3. Combine different instruments of AA and CDRFI through a layered approach so that the right funds are readily available in the right places, at the right time, for the different stages, severity and frequency of disasters
4. Make greater use of the resources and capabilities of the private sector to scale up DRF and anticipatory action.

The rich engagement and knowledge exchange made clear that cross-sectoral collaboration between humanitarian, development and climate community is still very limited and that a better understanding of needs and challenges will be key to advance the discussion.

<sup>1</sup> The InsuResilience Global Partnership promotes the term CDRFI to encompass all the relevant instruments, including those under Disaster Risk Finance (DRF).

## The Think Pieces

To deepen the discussions, the SC members came up with the idea to draft 'think pieces' – succinct, policy-relevant opinion pieces in which SC members could advocate for a particular position or objectively describe the issue/challenges and possible opportunities, options and solutions at hand. SC members developed a set of 10 questions, and they were then invited to address those questions based on their experience, technical expertise and further research. The think pieces are not necessarily providing the

views of the organisations of the respective authors but their personal perspective. About every 4-6 weeks the SC gathered over the course of 2022 to discuss and refine the ideas coming out of the think pieces.

This compendium presents these expert views. It consists of more than 20 contributions from a variety of stakeholders, offering their perspectives on ten overall guiding questions:

### 1a) What common principles guide the development of anticipatory action?

- › Think pieces by: Tara Chiu, Sophie Javers (University of California Davis)
- › Emma Flaherty (REAP Secretariat), Nikolas Scherer (Anticipation Hub)

### 1b) What are obstacles and bottlenecks for scaling up anticipatory action?

- › Global Risk Analysis and Reporting Section of the United Nations Office for Disaster Risk Reduction
- › Sarah Klassen (Start Network)
- › Tara Chiu (University of California Davis)
- › Ben Webster (REAP Secretariat)

### 1c) What sources of funding & instruments can support AA?

- › Jonathan Gascoigne (Centre for Disaster Protection)

### 1d) How can regional risk pools better incorporate AA?

- › David Maslo (African Risk Capacity)
- › Pacific Catastrophe Risk Insurance Company (PCRIC)
- › Constance Wong (Willis Towers Watson)
- › Theresa Lederer (RMS / Vivid Economics)
- › Markus Enenkel (Harvard Humanitarian Initiative), Nikolas Scherer (Anticipation Hub)

### 1e) What are promising technologies / solutions to scale up risk financing for anticipatory action?

- › Susanna Acland, Barnaby Willitts-King (GSMA Mobile for Humanitarian Innovation)
- › Tara Chiu, Sophie Javers (University of California Davis)

### 2a) How can we move donors from supporting instruments and programmes towards financing a more integrated 'strategy' at the country level?

- › Theresa Lederer (RMS / Vivid Economics)
- › Anna Farina (Start Network)

### 2b) How can 'alignment and complementarity of different CDRFI instruments across the DRM continuum be ensured?

- › Magdalena Mirwald, Jennifer Phillips, Soenke Kreft (Munich Climate Insurance Initiative, MCII)
- › Anna Farina (Start Network)
- › Jonathan Gascoigne (Centre for Disaster Protection)

### 2c) How could AA initiatives provide their expertise to CDRFI most effectively?

- › Viktoria Seifert (Willis Towers Watson) – presented her think piece in one of the SC calls

### 2d) How can the risk reduction effects of AA be recognized in the design and pricing of CDRFI instruments?

- › Jenty Kirsch-Wood (United Nations Office for Disaster Risk Reduction)
- › Swenja Surminski (London School of Economics), Daniel Stadtmüller (InsuResilience Secretariat)

### 2e) How can AA be supported by CDRFI, and incorporated in risk analytics, reinforce longer term risk management and development planning at a national level?

- › Matthias Range, Imogen Outlaw (GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit)
- › Sophie Javers, Tara Chiu (University of California Davis)

## Take aways

The think pieces and related discussions process have revealed important insights. The list below outlines *some* of the key themes that have emerged.

### Defining and locating Anticipatory Action within Disaster Risk Management (DRM)

- › Anticipatory Action can be understood as “acting ahead of predicted hazards to prevent or reduce acute humanitarian impacts before they fully unfold” (G7 definition)
- › In practice, Anticipatory Action takes different forms and happens on a range of scales, depending on the mandate of the implementing agency, the context, the hazard that people are facing, and the available forecasts. There are common parameters, however: (i) occurs *before* a hazard becomes a crisis; (ii) is *predicated* on a forecast or credible risk analysis of when and where a hazard will occur; (iii) the actions are *preventative* or mitigating in objective
- › Anticipatory Action is an important part of disaster risk reduction (DRR) efforts but narrower in scope as it refers to activities to prevent or mitigate potential disaster impacts before an *immediate* shock, or before acute impacts are felt or *fully unfold*. Since AA strengthens people’s capacity to manage risks it provides a bridge between DRR efforts and disaster response efforts to save lives and meet basic needs in the *aftermath* of a disaster.

### Challenges for scaling up AA & possible solutions

#### Challenges

- › DRM legislation/policy/governance: AA requires strong regulatory foundation upon which to build. Countries must be able to take action / release funds on the basis of a forecast
- › Silos between sectors, governments departments and actors: creates challenges for collaboration and jointed-up solutions
- › Political disincentives: governments often have a strong incentive to keep the status quo of discretionary crisis finance
- › Lack of systematic engagement with private sector: scepticism and distrust of humanitarian/development actors vis-à-vis private sector actors
- › Mistrust/uncertainty: scepticism about the forward-looking use of funds, inexperience dealing with false alarms
- › Triggers: Most triggers are based on a few select parameters, with vulnerability not systematically build-in (→ as in impact-based forecasting)
- › Data quality/harmonization: Socio-economic data often missing/difficult to compare over time; climate forecasts/seasonal

outlooks often not granular enough to support effective decision making; collaboration between (national) data provider limited

- › Finance: Finance for AA represents a minimum share of total humanitarian finance, with very little funding coming from development/climate space

#### Possible solutions

- › Building on the work of existing AA Technical Working Groups and country case study analysis, work with governments to develop specific scale-up plans for AA under which different actors can align and play their complementary roles and responsibilities.
- › Through regional roadmaps or action plans, showcase good practice and exchange learning among different governments
- › Invest in specific evidence targeting the needs of governments in climate-vulnerable countries (e.g. benefits, lessons learned) – not just donor governments
- › Strengthen engagement with private sector as national scale-up plans for AA are developed
- › Strengthen ‘probabilistic mindset’ among decisionmakers, donors, humanitarian organizations, civil society (e.g. via scenarios)
- › Explore how socio-economic baseline data can be used to complement or even ‘downscale’ impact-based forecasting and improve AA trigger mechanism
- › To improve interpretation of forecasting data, sensitize stakeholders about the limits of predictions/data and that it is necessary to cross-validate results
- › Strengthen collaboration at local level to improve data quality and availability (e.g. facilitation of cross-country learning on risk data/analytics, information flow etc.)
- › Increase share of humanitarian funding for AA (for AA system-building as well as for activations)
- › To scale AA, CDRFI could support rules-based anticipatory financing (e.g. via direct access modalities for local/humanitarian organizations, financing activations of AA & AA system building, investments in data at national/local level/risk communication, hybrid solutions such as insuring AA financing pools)
- › Global Shield against Climate Risks (see text box on page 9): this could be an opportunity to support countries in scaling and improving AA as part of a more coherent, systematic and sustained approach to financial protection, and in obtaining the necessary financial tools to enable effective AA. Local risk ownership and buy-in were seen as important factors for this.
- › UNFCCC negotiations: including AA in the discussions on financial solutions for Loss and Damage can increase political awareness and impetus for solutions linking AA with CDRFI



## Challenges and possible solutions for linking AA & regional risk pools

### Challenges

- › Mandate of most risk pools is still very limited: by focusing on providing post-disaster liquidity opportunities may be missed to reduce disaster impacts before they occur
- › Limited experience/track record by insurers in incorporating seasonal forecasting into index-based insurance policy design & pricing
- › Modelling focused on asset damages: better understanding is needed on hazard impact, the corresponding needs for vulnerable people, and the implications for AA, disaster response and relief
- › Hazard covered to date very limited and focused on acute events instead of slow and creeping events (such as heatwaves, drought, sea level rise) which are expected to intensify with climate change
- › Scaling up social safety net is challenging (identifying/pre-registering beneficiaries, capacities etc.)

### Possible solutions

#### *Regional risk pools could*

- › review their mandate and expand their product line
- › move to forecast-based triggers (using impact-based forecasting approaches used in the humanitarian sector) and/or use adapt a second forecast-based trigger that allows to finance anticipatory action (dual trigger structure/time-layered approach); payout could be small in size to balance premium increase, for a pilot see the [African Risk Capacity's 'anticipatory insurance'](#)
- › make payouts conditional on action plans and/or targeted actions (similar to ARC and SEADRIF); for PCRIC and CCRIF, payouts are currently at the discretion of governments
- › allow for more effective collaboration with frontline actors (e.g. local actors, humanitarian organizations)
- › reward effective AA (e.g. premium reductions, free insurance top up / technical assistance)

## Challenges and potential solutions for aligning & integrating AA – CDRFI

### Challenges

- › External/donor support for AA and CDRFI at country level often happens in sectoral silos, which misses opportunities for alignment, synergies and maximizing impacts
- › Collaboration and engagement at the county level: limited understanding/overview of who is doing what and where
- › Barriers to alignment and complementarity at the country level often not all technical but political: national policymakers and donors may have different strategic objectives and interests
- › Data on socio-economic drivers of risk at the country level are often very limited but such data has great potential for risk reduction and improve predictions/modeling
- › Division of roles and responsibilities between development and humanitarian actors for joint system built up/approach not yet clear; clarification needed to allow for deeper collaboration and innovative financing modalities (at global but also national level)
- › Complexity: innovative and integrated approaches tend to be very complex, lengthy and sophisticated, which might make them unattractive and even non-implementable.

### Potential solutions

- › Improved coordination within the donor organization itself (e.g. through better alignment with strategic priorities and initiatives, organization-wide exchange and learning) and improved coordination across donors organizations (e.g. through a joint framework on CDRFI and AA with common objective and monitoring system, common data standards/formats, structured knowledge exchange & coordination)
- › Joint country-specific stakeholder analyses could be a starting point for joint/collaborative AA – CDRFI programming at the country level (e.g. project/programmes, funders, implementers etc.), see below for text box on the Global Shield against Climate Risks



- › Clarification of different objectives/interest of humanitarian, development and private sectors interest and followed by clarification how they can be met
- › Joint in-country analysis of risks (hazards, vulnerabilities) and (coverage) gaps potential entry point for an integrated AA/CDRFI approach (see below for text box on Global Shield) Development of (country owned) DRF strategy: joint risk analysis should be followed by the development of a DRF strategy (= suite of instruments) to serve local needs and address the protection gaps; DRF strategy should be based on the principles of risk layering (where different instruments address different hazards and groups) and prioritize greatest risk; local actors and communities and other relevant stakeholder should inform such a strategy process from the very beginning on; DRF strategy should systematically integrate AA as an objective/component. This SC community could provide support, e.g. in relation to the Global Shield (see text box below)
- › Harmonization of triggers: analysis if/where/how triggers for AA and CDRFI instruments can be harmonized to allow for greater coherence/cover for in-country gaps
- › Capacity building: there is a lack of experience with risk layering outside of insurance community, e.g. AA actors. It is also important to consider how risk layering could be applied across different projects, or at community level
- › Resource pooling/burden-sharing across sectors/agencies: CDRFI & AA often face the same challenges, e.g. lack and quality of data. Pooling of resources and exchange around challenges/technical aspects of data, trigger design, modeling and targeting are potential entry points for closer collaboration
- › Incentives by donors: donors could set stronger incentivizes for cooperation (e.g. by aligning and easing access to project financing across sectors and by demanding synergies at the programme and project level)

## Global Shield against Climate Risks

**This initiative is politically co-led by the V20 and Germany and collaborates with a wide network of stakeholders. The Global Shield contributes to the international efforts to avert, minimise and address climate-related losses and damages by enhancing financial protection against climate-related disaster risks for poor and vulnerable people and countries.**

**The Global Shield aspires to integrate AA and CDRFI at the country level, in particular through setting up in-country dialogues with all relevant stakeholders. This in-country dialogue includes a stock-take of all relevant projects/programmes in the country (including AA approaches), detailed risk analyses and a prioritisation for the most urgent needs when it comes to building financial protection, following a risk-layering approach.**

**The in-country dialogues in the select pathfinder countries provide an opportunity for the take aways of the think pieces to be applied and the SC and its members will contribute to these processes where appropriate.**

**For further information, please consult the following links:**

- › [Global Shield – InsuResilience Global Partnership](#)
- › [InsuResilience Magazine 2<sup>nd</sup> edition: Focus topic Global Shield](#)



### Technologies & private sector solutions for scaling up risk financing for AA

- › Mobile technology: this could be used to a greater extent to improve understanding of risks (e.g. by using mobile phones to collect data on vulnerability/situation on the ground), the communication of risks (e.g. via early warning messages), the planning of an intervention (e.g. by using data generated by the phone), and to distribute cash and vouchers
- › Mobile technology/digital tools: to enable leveraging data when needed (and with appropriate data protection and privacy safeguards) requires stronger collaborations between mobile network operators / private sector companies and clear governance frameworks and comprehensive understanding of the digital landscape (incl. technology infrastructure, connectivity, coverage, regulatory environment); also, the skills of users are key
- › Earth observation: satellite technology may help to create more accurate indexes and forecasting and help to improve (insurance) contract designs; social innovations could be used to confirm trigger
- › Opportunities for private sector engagement: insurers other companies have also been contributing to risk reduction/disaster preparedness, entry point for learning for AA community
- › Private / alternative finance: Philanthropic funders & Islamic Finance providers might be interested to provide funding; development arms of large corporations might be interested in funding/support with technical improvements
- › Social protection / safety nets provide an opportunity to working together (linking AA & risk financing)



## Workstream 1 Guiding Questions

What are barriers and opportunities for the risk financing community to scale up Anticipatory Action?

# 1

**Guiding Question 1a**

What common principles guide the development of anticipatory action?



## First contribution

# What common principles guide the development of anticipatory action?

**Author:** Tara Chiu, Sophie Javers

**Institutional affiliation:** The Feed the Future Innovation Lab for Markets, Risk and Resilience at the University of California Davis

**Contact details:** tlchiu@ucdavis.edu, sejavers@ucdavis.edu

## Making the Sum More than the Parts: Leveraging Investments to Maximize Value to the End Beneficiaries

Many investments in anticipatory action focus narrowly on indirect benefits such as consumer demand, uptake and sales, and coverage. While these are important outcomes to be considered and to strive toward, this approach can limit the potential impacts of investments in anticipatory action. Commitment to broader guiding principles that focus on maximizing value to the world and communities have the potential for even greater impacts.

## Strategic Investments in Public Goods

To date there have been significant investments in premium subsidies in an effort to make disaster risk insurance more accessible and available for those most at risk. However, building off a shared commitment to public goods, there are underexplored avenues to reduce the cost of insurance and increase accessibility while also adding additional welfare benefits to society. For example, investments in anticipatory action could focus on

- › Subsidizing insurance as social protection with “top up” opportunities (this can create both a minimum market and delivery platform for commercial partners)
- › Providing shorter-term subsidies that reduce the costs and risks to farmers of learning about insurance until it triggers, then phase out
- › Supporting the market through “public good support” that overcomes barriers and costs of insurance products, such as paying for collection of high-quality data and consumer education (including financial literacy)

By thinking about investments in public goods that not only help anticipatory action with a focus beyond intermediate outcomes, investors can have broader impacts on community welfare.

## Strategic Investments in Quality Design

Satellite technology has been increasingly valued in creating more accurate indexes and forecasting that allow for speedy risk financing payments. New innovations allow not only for innovative index design, but for testing the quality and identifying the shortfalls that emerge from the inevitable basis risk part of any index-based products.

Investments in quality anticipatory action should demonstrate a commitment to quality product design, including index design, contract design and pricing. Responsible and effective anticipatory action has to be based on the fundamental principle of impartially and quantitatively confirmed quality.

There is currently no industry-agreed approach to testing and verifying a “do no harm” quality standard. In response to this gap, the Feed the Future Innovation Lab for Markets, Risk and Resilience has proposed a Minimum Quality Standard (MQS) for agricultural index insurance that tests whether products do not leave families worse off for having purchased them. Quality



standards protect both consumers from harm and market actors from unfair competition with low-quality products. Failure to protect both consumers and markets renders these types anticipatory tools and interventions unsustainable and unscalable in the long-run.

## Strategic Approaches to Bundling

Bundling has often been used to try to boost uptake and coverage of insurance, however, more strategic approaches to bundling are available. A potential avenue for more strategic investment can include bundling insurance with other disaster risk management technologies to better cover the whole risk profile of the target beneficiary.

For example, In Mozambique and Tanzania, the MRR Lab and partners tested a bundle of stress-tolerant maize seeds with index-based insurance that would trigger seed-replacements after severe drought. This package of climate-risk responsive interventions was constructed to maximize the complementarities between the two tools, in which the seeds covered mild to moderate risk and the insurance covered severe shocks that the seeds could not manage. Insured farmers increased their total investments and were able to bounce back after a severe drought with impressive percentage gains in yields harvested.

Smart combinations of tools are not of course limited to bundling insurance with climate smart seeds. Research is ongoing to test

combining portfolios of disaster risk management tools in a way that allows farmers to flexibly combine and move between tools based on their own needs, constraints, capacities and preferences. This could include not only agronomic innovations and insurance, but also indexed savings accounts and contingent loans. Giving families options to choose for themselves should be a principle of anticipatory action.

Anticipatory action has the potential to do more than boost uptake and coverage of disaster risk finance and insurance. By thinking beyond target outcomes to the possibility of broader impacts, and critically considering the potential of investments in anticipatory action and its potential to create additional value-add, we can maximize the impacts of scarce resources on end beneficiaries.

## References / Further Reading

- › [Moving Small-scale Farmers Up the Ladder of Protection and Possibility](#)
- › [Policy Brief: A Minimum Quality Standard \(MQS\) to Ensure Index Insurance Contracts Do No Harm](#)
- › [Report: Bundling Innovative Risk Management Technologies to Accelerate Agricultural Growth and Improve Nutrition](#)
- › [Evidence Insight: Generating Resilience+ to Reduce Poverty and Spur Agricultural Growth](#)

## Second contribution

**Authors and their Institutional affiliation:** Emma Flaherty, REAP Implementation Lead, REAP & Dr Nikolas Scherer, Manager for Policy & Advocacy on Anticipation and Disaster Risk Financing, Anticipation Hub

**Contact details:** emma.flaherty@ifrc.org, n.scherer@drk.de

## Anticipatory action an essentially contested concept?

Though anticipatory action has been gaining profile and support within the humanitarian community, there is still some way to go in mainstreaming the concept and associated terminology both within the humanitarian sector and to stakeholders in the development, climate, financing, Early Warning and other stakeholder communities. This is exacerbated by the fact that the words “anticipation” or “anticipatory” are commonly used words with norma-

tive or subjective meanings within industries and in everyday language. So, people may have very different ideas of what we mean when we speak to them about anticipation or anticipatory action.

This can be further complicated by the fact that organisations involved in anticipatory and early action do not always have consensus on the definitions of key terms. This can present a serious barrier to stakeholder engagement, particularly as we work to bring a more diverse stakeholder group to the field of anticipatory action.

It is not necessary nor feasible to have absolute agreement and alignment on all of the terminology related to anticipatory action- though efforts to improve coherence are underway. It is however highly necessary to be able to speak with one clear voice and set of messages when explaining what anticipatory is, what are they components and why people should become supportive and indeed engaged in this agenda.

## Common parameters

Anticipatory action takes different forms and happens on a range of scales, depending on the mandate, the context, the hazard that people are facing, and the available forecasts. There are common parameters, however:

- › occurs **before** a hazard becomes a crisis
- › is predicated on a **forecast** or **credible risk analysis** of when and where a hazard will occur
- › **the actions are preventative** or **mitigating** in objective

The key basic steps that most commonly comprise an early action planning process are as follows:

- › **Conducting a risk assessment:** Identifying hazards and risks, vulnerable communities and areas risks to address
- › **Identification of forecasts:** Checking available forecasts and data for relevance, quality and robustness
- › **Setting the trigger:** Defining the threshold at which the anticipatory action will be taken. The trigger could be anything from a simple launch declaration by the person in charge, to a sophisticated “impact-based forecasting” model issued by the national hydromet service agency, and involve multiple stakeholders, data sources, and analytics. Impact-based forecasting model predict what a hazard could do in terms of consequences, rather than forecasting only what a hazard could be.
- › **Exploring and selecting the anticipatory action:** the activities to be undertaken to reduce the humanitarian impact of an extreme event. This is mostly done with local authorities and populations at risk.
- › **Identifying the financing mechanism:** the funds and channel to deliver anticipatory actions
- › **Developing anticipatory action plan:** All this information is put together in a standard operating procedure including roles and responsibilities. It defines clearly who takes action when, where, and with what funds.



The process is not necessarily a step-by-step process. The activities can be done in parallel and some of them depend on others. First instance, a risk analysis is the very first thing that should be implemented, as this will contribute to selection of the trigger. It is important, however, that the trigger and anticipatory action are agreed in advance. Ideally, triggers are based on objective data (e.g. recorded wind speed, amount of rainfall).

## Recommendations / Further readings

- › Red Cross Red Crescent Practitioner’s FbF Manual
- › Anticipation Hub 2022 ‘How Anticipatory Action make a difference’
- › Anticipation Hub Strategy 2021-214
- › IFRC World Disaster Report 2020 CH 4
- › REAP Strategic Vision
- › REAP The Enabling Environment for Early Action
- › REAP Framework for Action
- › REAP State of Play on Early Action 2021
- › REAP Early Action Glossary/ Phrasebook (forthcoming in Q3 2022)

**Guiding Question 1 b**

**What are obstacles and bottlenecks for scaling up anticipatory action?**





## First contribution

# What are obstacles and bottlenecks for scaling up anticipatory action?

**Authors:** Global Risk Analysis and Reporting Section

**Institutional affiliation:** United Nations Office for Disaster Risk Reduction (UNDRR)

**Contact details:** elten@un.org

## Problem statement

UNDRR observes multiple obstacles for the scale-up of anticipatory action. Some pertain to human decision-making, others to prevailing technical challenges. With regards to decision-making they include, among other:

- › Scepticism about the ‘forward-looking’ use of funds in the face of an increasing global humanitarian funding gap for humanitarian response (between 2012 and 2019 around 60 percent of costs were covered, in 2020/21 only 50 percent and 54 percent respectively<sup>2</sup>).
- › Inexperience in dealing with false alarms, which are a natural component of every forecasting system. While there is increasing acknowledgement that anticipatory action is an effective and cost-saving investment, the donor community and implementing partners remain unaccustomed and cautious with false alarms and at time might also struggle explaining these to their constituents.
- › Additionally, there is risk that a ‘no regret’ approach to may create a perception that anticipatory action is a gamble where hazard forecasts and activation protocols may be ignored because vulnerable communities are ‘anyway always in need of support’.

Technical challenges evolve, among other, around:

- › Mono-dimensional trigger mechanisms: While impact-based forecasts are improving for certain hazards (e.g. the cyclone impact model of RC 510) triggers for AA tend to be based on select environmental factors e.g. typhoon intensity and paths. Risks to individuals and communities are rarely built into trigger mechanisms in part because such data are not easily available and costly to collect. Also, in contrast to weather or climate forecasts, socioeconomic information is rarely comparable over large scales, or over many years. This is because survey programs are seldomly harmonized among data collecting organizations and methods differ between different countries. As a result, anticipatory action often remains blind to the degree of preparedness, vulnerability, and resilience of the population in the affected area, e.g. along typhoon paths.<sup>3</sup>

- › The availability and usability of hazard, impact and forecast data at sub-national level: Most anticipatory projects underline the importance of locally led early action and local risk ownership. However, direct collaboration with national data providers as the basis for local risk ownership is often underestimated. The 2022 State of Open Humanitarian Data Report<sup>4</sup>, for instance, highlights that mainly due to outreach with local partners significant improvements were made, e.g. with the availability of acute malnutrition data (in 2019, only 19 percent of acute malnutrition data had been complete; in 2021, this number had increased to 73 percent). On the other hand, the same report found that many national authorities tended to keep a poor record of hazard forecasts (e.g. flood forecasts in Nepal), making it difficult to evaluate the forecasting skills and lead time of a model.
- › While improving, impact-based forecasting often lacks the granularity to provide effective decision-support. This is particularly true for seasonal climate forecasts, partly due to the coarse resolution of the data and the inability of seasonal predictions to define when and where exactly a shock will occur. Moreover, while the performance of climate forecasts is improving, decision-makers will still need to choose between longer lead times, earlier action, more uncertainty in the prediction, and shorter lead times, less time to prepare for impacts, but higher confidence in the prediction. Naturally, these considerations differ strongly for different hazard types, for instance slow-onset (e.g. drought) or rapid-onset (e.g. flood) events. As for understanding forecast results, the choice of method, [visual representation of a forecast](#) and related uncertainties, play a vital role. As such it is important that all stakeholders involved in the design of an AA system and resulting early actions are aware of the limitations of all kinds of data, including other climate data (e.g. from weather stations or satellites), risk data and quasi-static background layers (e.g. livelihood zones).

<sup>2</sup> FTS UN OCHA Humanitarian aid contributions

<sup>3</sup> INQUIRER.net (2022): Data collection critical to disaster mitigation

<sup>4</sup> The State Of Open Humanitarian Data 2022

## Possible Solutions/Alternatives

UNDRR sees the following solutions for challenges associated with both human decision-making and technical issues.

- › To address the challenges related to human decision-making, donors, humanitarian organizations and civil society will need to learn to accept uncertainty in scenarios, in which the benefits of acting early outweigh the risk that the predicted shock does not occur. This probabilistic mindset is based on the idea that future events are uncertain while their likelihood can serve as the basis for judgment. However, humans do not **intuitively grasp probabilities**<sup>5</sup>. It is a skill that needs to be learned and that requires a translation of data into actionable knowledge to guide early action on the ground.

To help address the technical challenges around:

- › **Impact-based forecasting:** Explore how socioeconomic baseline data can be used to complement or even 'downscale' impact-based forecasting and to improve AA trigger mechanisms. A better understanding of livelihoods might enable a more dynamic triggering process, for instance by adjusting trigger thresholds related to hazards based on recently updated information about lack of coping capacities or insights about the socioeconomic consequences related to previous shocks. This work could be initiated through the development of a short

report/white paper to complement the WMO's guidelines on Multi-hazard Impact-based Forecast and Warning Services<sup>6</sup> and complementary reports with a focus on socioeconomic data, identifying hazard-specific bottlenecks between weather/climate data and the 'human terrain' (e.g. the consideration of gender disaggregated data).

- › To help improve the interpretation of forecasting data it is important that all stakeholders involved in the design of an anticipatory actions system and resulting early actions are aware of the limitations of all kinds of data, including weather and climate data (e.g. from weather stations, models, or satellites), risk data and quasi-static background layers (e.g. livelihood zones). One of the most promising approaches is to rely on a **convergence of evidence approach**<sup>7</sup>, which combines different independent data sources into one cross-validated narrative. For drought, for instance, there are various satellite-derived datasets, which can be used to characterize meteorological conditions (rainfall), agricultural conditions (e.g. soil moisture, vegetation greenness), or even hydrological conditions via estimations of **groundwater change and recharge**<sup>8</sup>.
- › Strengthen locally led anticipatory action, collaboration with local partners and investments into local data and AA mechanisms. Priorities should include:
  - › Support of national and global experts to work together to achieve a minimum level of data availability for risk analysis.
  - › Research initiatives to develop proxy indicators, or to apply modelling and scenario building techniques to fill gaps in risk data.
  - › Evaluation of hazard-specific disagreements between national/global disaster loss databases, such as EMDAT and DESINVENTAR.
  - › Initiate an AA-focused network analysis to assess gaps according to local experts as well as the existence of complementary risk management/financing instruments
  - › Facilitation of cross-country learning on risk data and analytics and information flow between national stakeholders and global technical expertise
  - › Capacity development on disaster and risk-data literacy for national practitioners, including non-traditional DRR stakeholders



5 Scientific America

6 WMO Guidelines on Multi-hazard Impact-based Forecast and Warning Services

7 American Meteorological Society: Exploiting the Convergence of Evidence in Satellite Data for Advanced Weather Index Insurance Design

8 Barbosa, S. A., Pulla, S. T., Williams, G. P., Jones, N. L., Mamane, B., & Sanchez, J. L. (2022). Evaluating Groundwater Storage Change and Recharge Using GRACE Data: A Case Study of Aquifers in Niger, West Africa. *Remote Sensing*, 14(7), 1532

## Second contribution

**Author:** Sarah Klassen

**Institutional affiliation:** Start Network

**Contact details:** sarah.klassen@startnetwork.org

### Increasing Anticipatory Action Finance and Building Anticipation Systems

1. **Anticipatory finance continues to represent a minimum share of total humanitarian finance<sup>9</sup>; a very small percentage of humanitarian financing is pre-arranged, available when warnings materialise and used in an anticipatory manner.** More anticipatory finance must be made available in order to scale-up anticipatory action approaches.
2. **To ensure anticipatory systems are able to trigger anticipatory financing, additional investments are needed to develop predictable, and flexible financing mechanisms.** While more and more hazards are predictable, a minimum share of humanitarian funding is currently available for anticipatory humanitarian action<sup>10</sup>. When funding is available, it is most often limited to single-agency, small-scale projects. Existing pooled funds are the ideal channel to increase funding for anticipatory action that is coordinated, timely, and at scale.
3. **In order to protect more people from disasters and crises, more funding is required to build anticipatory action systems<sup>11</sup>.** This involves building anticipatory action expertise, early warning systems and the operational processes to implement anticipatory programming.

### Reforming Global Climate Finance

4. **Global climate finance processes and disaster risk financing architecture must be reformed so that they better support anticipatory action system development which complements and protects longer-term adaptation efforts<sup>12</sup>.** 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. The Santiago Network for the United Nations Framework Convention on Climate Change (UNFCCC), which aims to catalyse technical assistance on loss and damage, could be one entry point to support anticipatory action system building and could contribute to the ambitions set out in the Glasgow Climate Pact concerning loss and damage.

### Strengthening Locally-Led Anticipatory Action

5. **To increase the sustainability and scalability of anticipatory action approaches, funding should be allocated with the aim to strengthen locally-led anticipatory action<sup>13</sup>.** More support is needed for existing instruments that allow direct access to financing to local NGOs (i.e. Start Network's Start Ready).
6. **In order for anticipatory action to be truly sustainable, early warning systems and innovative financing mechanisms need to be nationally owned and embedded in national and local disaster risk management policies, laws, and processes<sup>14</sup>.** The integration of anticipatory action systems into existing disaster risk management structures and climate adaptation frameworks (e.g. NAPs, NDCs) is the best way to complement existing efforts to reach larger parts of the population and make sure anticipatory action becomes "business as usual". Moreover, updating national and local disaster risk management strategies to include anticipatory action, will support national government efforts to achieve Target E of the Sendai Framework for disaster risk reduction<sup>15</sup>.

9 Weingärtner, L and Spencer, A (2019). Paper 2: Analysing gaps in the humanitarian and disaster risk financing landscape. ODI and START Network

10 Weingärtner, L and Spencer, A (2019). Paper 2: Analysing gaps in the humanitarian and disaster risk financing landscape. ODI and START Network

11 Anticipatory Action Task Force (2022). 'Enabling Anticipatory Action at Scale to Address the Challenge of the Climate Crisis: A Policy Brief for G7 Countries'

12 Anticipatory Action Task Force (2022). 'Enabling Anticipatory Action at Scale to Address the Challenge of the Climate Crisis: A Policy Brief for G7 Countries'

13 Red Cross Red Crescent Climate Centre (2020). Exploring the feasibility of SEADRIF in the Red Cross Red Crescent National Societies

14 Anticipatory Action Task Force (2022). 'Enabling Anticipatory Action at Scale to Address the Challenge of the Climate Crisis: A Policy Brief for G7 Countries'

15 Target E is "Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020": <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>



### Enabling Better Technical Support for Anticipatory Action

7. **In order to scale anticipatory action, more investments are needed in data at the national and local levels<sup>16</sup>.** This data can then be aggregated globally. Local responders have the greatest vested interest in minimising and averting loss and damage caused by climate change and they must be connected to the risk information that they need to act. We must also ensure that technical investments are coordinated.
8. **Anticipatory action requires the increased production of multiple and different kinds of data** (i.e. hazard monitoring and modelling, vulnerability and impact data and global modelling). We must also enable more participatory data exchanges between those who produce risk data and those who act on this data.
9. **Anticipatory action operational systems must be able to better appreciate and navigate decision-making under uncertainty.** Additional support is needed in order to help anticipation actors navigate this uncertainty<sup>17</sup>.
10. **In order to scale-up anticipatory action, more investments are needed in the communication of science and risk monitoring and modelling.** We must ensure greater transparency and accountability when taking anticipatory action decisions<sup>18</sup>.

## Third contribution

**Author:** Tara Chiu

**Institutional affiliation:** The Feed the Future Innovation Lab for Markets, Risk and Resilience at the University of California Davis

**Contact details:** tlchiu@ucdavis.edu

### Defining and Measuring “Success” to Enable Scaling

In order to design well and coordinate well across AA efforts, we need to have a shared definition of what “success” looks like and how to empirically, objectively measure it. How we define success directly affects how we design AA interventions, and coordination across interventions is impossible unless we share principles for how we define and measure success. Further, it is important that these definitions and measurements are developed with the end beneficiary in mind – including those interventions that take place at the national/sovereign level.

#### **A shared vision and definition of “success” of AA efforts is required to align and coordinate scaling efforts.**

At times, different stakeholders each – understandably – come to the table with their own agendas and their own definitions of success for AA. Typically, however, most donors and governments hope, at a minimum, to help households more effectively manage shocks and stresses when they occur. Increasingly, the vision of success has expanded to include consideration of how improved risk management can lead to inclusive agricultural transformation, as better risk management can induce product investments.

Others may narrowly define success of their investments in terms of market reach, number of households with access to insurance,

etc. Though these are important preconditions to scaled welfare impacts on target populations, it is limiting, as access to products alone is not an adequate indicator of improved household wellbeing so is an inadequate definition of success. Conceptually, most agree that AA should positively impact poor and/or vulnerable individuals. However, that definition is not always clearly identified and, as a result, may not be at the center of AA design and limit the ability of different actors to effectively coordinate, and may limit the ability of promising interventions to identify product weaknesses before attempting to scale.

#### **Common principles defining success necessitate common principles to measure success – and this must be done with the end beneficiary in mind.**

If, indeed, a key definition for “success” of anticipatory action is resilience, how then do we define and measure “resilience” impacts? Similarly, alignment of stakeholders on investment actions in designing and scaling AA requires alignment in measures of success, as any measure of success directly impacts program design.

16 Start Network (2021). Information is Power: [Connecting Local Responders to the Risk Information that they Need](#)

17 Start Network (2018). [Navigating Decision-Making Under Uncertainty: An Approach for Start Fund Decision Makers](#)

18 Start Network (2021). [Scientific Due Diligence for Humanitarian Disaster Risk Financing: A Guide for Data Scientists and Humanitarian Practitioners](#)



This kind of standardization and agreement is relevant and important even for anticipatory action that does not directly target the individual household. For example, sovereign risk management tools are ostensibly designed to ultimately benefit poor and vulnerable households, however more needs to be done to align on measurement of macro/meso interventions on the ultimate individual beneficiaries.

Shared impact measurements are required for successful alignment of design and decision-making. Lack of coordination in success metrics can lead to disjointed, siloed efforts across stakeholders and blunt potential impacts. In addition, without attention to measuring impacts – not only outputs – we can underutilize or misuse limited resources at best, and at worst we can do more harm than good. In particular, thinking about the benefits for the end user/client should think holistically about the benefits; this includes not just the ability to recover after shocks occur, but whether risk management tools are successfully setting individuals and households on new trajectories. If we don't carefully and holistically measure the effects on end beneficiaries, we can miss huge opportunities for impact. And without these shared definition and metrics, it is impossible to make evidence-based decisions for scaling (and to identify opportunities to scale more effectively).

**Shared commitment to definition and measurement of success must be the foundation for development and design of coordinated, effective anticipatory action.**

Agreed upon definitions for success and measures for impact then allow us to have a shared commitment to what are “good” approaches to anticipatory action, including what effective and high-quality design looks like, how we measure our progress, and how we ensure we are supporting approaches that drive us toward our collective understanding of success.

Without shared definitions and measurements, our efforts will be disjointed and may be ineffective (and, at worse, harmful). The community needs to collaborate to form shared visions for success to be able to overcome challenges and bottlenecks moving forward.

## References / Further Reading

- › **Policy Brief:** A Minimum Quality Standard (MQS) to Ensure Index Insurance Contracts Do No Harm
- › **Evidence Insight:** Generating Resilience+ to Reduce Poverty and Spur Agricultural Growth
- › **Evidence Insight:** Evaluating the Case for National Disaster Risk Insurance



## Fourth contribution

**Author:** Ben Webster (drawing heavily on reports of others)

**Institutional affiliation:** REAP Secretariat

**Contact details:** Ben.Webster@ifrc.org

Despite growing interest in and support for the AA agenda, achieving scale at a national level (thereby protecting more lives and livelihoods from predictable crises) remains challenging for a number of reasons:

### 1. AA requires a strong national DRM foundation (legislation and policy) upon which to build

“AA must be built on a strong DRM foundation, which may include national- or local-level contingency plans, national funding, and capacity within the national DRM agency. In countries without a strong DRM foundation, there are many challenges to embedding AA, as was highlighted by stakeholders in Mozambique and Malawi. It must be part of a national risk management strategy to specifically address ‘residual risk’ and be integrated with DRR and CCA investments/measures that address more systemic challenges.” (see Country Case Study summary report – REAP, 2021)

### 2. Silos between sectors, government departments and actors

“Early action is genuinely a Nexus issue and sits at a point of juncture between the mandates and priorities of international humanitarian, development and climate actors, and between multiple ministries in country, including those relating to finance, economic development, climate and environment, agriculture, disaster risk management, social welfare and so on. It also involves both public and private sectors. These actors all have different institutional perspectives, priorities, ways of working and administrative structures which creates a challenge for collaboration and joined-up solutions. They sometimes lack understanding of each other’s work and approaches, clinging to outdated perspectives of ‘who should do what’ that do not reflect realities on the ground or make space for early action programming” (See Financing Early Action report, Zoe Scott, 2022).

### 3. Political disincentives, especially in relation to ex ante decision-making

“Governments have strong incentives to keep the status quo of discretionary crisis finance both in how they use their own budget and in how they receive and use funds from others. Whilst humanitarian actors have been using the term ‘no regrets’ to justify early action, for a government the concept is less appealing; being seen to have wasted money or to not have effectively responded to a crisis can be a cause for deep regret with serious political repercussions. Decision-making processes, particularly around the allocation of budget, are typically entrenched and driven by a wide range of political pressures. Even in high-income countries, early action with automatic finance is not the norm for the risks they face. These political barriers and how they relate to finance for early action are not currently well understood and could be investigated more, both in relation to donor governments and vulnerable countries.” (See ‘Financing Early Action’ report, Zoe Scott, 2022).

### 4. The need for related governance reform

“In many countries, administrative, legal and public financial management reforms are needed before money can be triggered ahead of a crisis or to ensure that disbursed money flows quickly through government systems and out to beneficiaries. For example, in the Philippines, anti-corruption measures prevent government funds triggering before needs arise and would require changes to legal frameworks and PFM processes, both of which would be time-consuming and require high levels of political will (Scott, 2022). Similarly, parametric insurance can payout within hours but there are multiple examples of funds then getting stuck in government accounts rather than flowing quickly out to beneficiaries (for example, IRAM 2020). Detailed analytical work is needed in each context to understand how to move forward.” (See ‘Financing Early Action’ report, Zoe Scott, 2022).

## 5. Forecasting capacities and data gaps

“Reliable forecasts are essential for anticipatory action and some early response financing instruments, such as parametric insurance, require technical skills in risk modelling and access to accurate data, including on hazards, exposure and vulnerability. In low-income contexts, and particularly in fragile and conflict affected states (FCAS) data is often partial and the necessary skills to interpret it are often missing. This leads to a lack of trust in forecasts which impacts on actors willingness to innovate and trial anticipatory approaches.” (See ‘Financing Early Action’ report, Zoe Scott for REAP, 2022).

## 6. Lack of systematic engagement of private sector

“The private sector has been involved in crisis response for decades, for example via insurance, and there are many examples of publicly funded programmes to build support and a better enabling environment, for example the InsuResilience Investment Fund (IIF). However, there is still scepticism and distrust of private sector actors amongst humanitarian and development actors. Some do not yet appreciate that the private sector is essential for two elements that are currently missing from early action: scale and sustainability. Honest conversations are needed about some of the challenges of collaboration and a commitment to push through to find solutions.” (See Financing Early Action report, Zoe Scott, 2022).



## Possible Solutions/alternatives

- i. Building on the work of existing AA Technical Working Groups and country case study analysis, work with governments to develop specific scale-up plans under which different actors can align and play their complementary roles and responsibilities.
- ii. Through regional roadmaps or action plans, showcase good practice and exchange learning among different governments
- iii. Invest in specific evidence targeting the needs of governments in climate-vulnerable countries – not just donor governments.
- iv. Strengthen engagement with private sector as national scale-up plans are developed

## Works cited

- › Draft report from Zoe Scott: ‘Financing Early and Anticipatory Action’, 2022

## References / Further reading

- › A Strategic Evidence Roadmap for Climate and Disaster Risk Finance and Insurance
- › Centre for Disaster Protection Publications Center
- › Anticipation Hub Evidence Database
- › REAP Anticipatory Action
  - › Case Study Ethiopia
  - › Case Study Fiji
  - › Case Study Guatemala
  - › Case Study Jamaica
  - › Case Study Madagascar
  - › Case Study Malawi
  - › Case Study Mozambique
  - › Case Study Nepal
  - › Case Study Niger
  - › Case Study Philippines

**Guiding Question 1c**

What sources of funding & instruments are available in the CDRFI community and the private sector that could help to provide financial coverage for AA preparedness/readiness expenses?





## First contribution

# What sources of funding & instruments are available in the CDRFI community and the private sector that could help to provide financial coverage for AA preparedness/readiness expenses?

**Author:** Jonathan Gascoigne

**Institutional affiliation:** Centre for Disaster Protection

**Contact details:** jgascoigne@disasterprotection.org

The origins of anticipatory action (AA) are in the humanitarian sector, where Forecast-based financing (FbF), forecast-based action (FbA), early warning early action (EWEA) have become increasingly familiar concepts. The Red Cross and Red Crescent Movement, particularly via their Climate Centre<sup>19</sup>, Start Network, WFP, and FAO have pioneered much of this innovation. For finance, these organisations have used designated funding pots from pre-existing internal emergency funds. For example, OCHA have recently used their Central Emergency response Fund (CERF) to finance anticipatory humanitarian action<sup>20</sup>, with 5 pilot projects in 2020 and 6 more in 2021<sup>21</sup>.

Amongst the Bretton Woods institutions, the World Bank has committed to making crisis preparedness a cross-cutting theme in IDA 20 replenishment<sup>22</sup>, available to 74 low-income countries. The IMF has also committed to making resilience and early action central to its Fragile and Conflict-affected States Strategy<sup>23</sup>.

Bilateral donors such as UK and German governments also support these AA funding pots. In January 2021, the German Federal Foreign Office (GFFO) announced its support of €4.5 million for a programme of AA activities across a global network of NGOs<sup>24</sup>. In May 2021, FCDO provided £12m to support the Start Fund<sup>25</sup>. At the 2021 G7 meeting, governments including the UK committed to work with Africa Risk Capacity to deliver \$1bn of drought, flood and storm risk each year from 2025/26<sup>26</sup>.

The US has pledged to support early warning systems via its President's Emergency Plan for Adaptation and Resilience (PREPARE) strategy. There was a reported \$ 3billion planned for adaptation finance annually by 2024<sup>27</sup>.

The May 2021 G7 famine prevention and humanitarian crises compact includes a commitment for all G7 members to:

'increase anticipatory action throughout the humanitarian system, including through our funding at the country level, and harness complementary finance and planning by drawing on climate and disaster risk finance and development funds.'<sup>28</sup>

The German G7 Presidency for 2022 looks set to build momentum for this critical agenda, with the climate crisis particularly in mind<sup>29</sup>. As an aside, how easy is it to establish a target for what a 'good' level of pre-arranged financing would look like?<sup>30</sup>

However, finance for AA is small in both relative and absolute terms: with only 1 per cent of crisis funding being pre-arranged<sup>31</sup>. Efforts are also being made more accurately and consistently determine how much of their crisis financing can be classified as pre-arranged<sup>32</sup>.

As with much pre-positioned financing for vulnerable populations, there is a strong desire to move from pilot programmes to broader delivery at scale.

- 19 Red Cross Red Crescent Climate Centre: Anticipatory action
- 20 Learning from Anticipatory Action with the UN Office for the Coordination of Humanitarian Affairs (UN-OCHA)
- 21 OCHA facilitates collective anticipatory action
- 22 IDA (2021): Cross-Cutting Issues in IDA20
- 23 IMF (2022): The IMF Strategy for Fragile and Conflict-Affected States
- 24 Start Network (2021): German Federal Foreign Office supports innovative programme for early humanitarian action
- 25 Start Network (2021): UK AID PROVIDES £12M TO SUPPORT THE START FUND
- 26 The White House (2021): CARBIS BAY G7 SUMMIT COMMUNIQUÉ
- 27 The White House (2021): FACT SHEET: President Biden Renews U.S. Leadership on World Stage at U.N. Climate Conference (COP26)
- 28 UK Government (2021): G7 famine prevention and humanitarian crises compact
- 29 The German Federal Foreign Office – G7: Cooperation on the basis of shared values
- 30 CENTRE FOR DISASTER PROTECTION: Crisis Lookout
- 31 Anticipatory Action Event (2021): High-level Humanitarian Event on Anticipatory Action: A Commitment to Act before Crises, Co-chairs' statement, September 10, 2021
- 32 CENTRE FOR DISASTER PROTECTION (2021): Will the World Bank's IDA20 replenishment help low-income countries stay one step ahead of disasters?





The CDRFI community, as represented by the InsuResilience Global Partnership, consists of representatives from government, multilateral development banks (MDBs), civil society, the private sector and academia.

An identification of the challenges each of these groups face with regard to apportioning more finance to AA would be useful in better understand what sources of funding and instruments are or aren't available, and how quickly that situation is likely to change. For example, for humanitarian NGOs, the central ethical principle of responding as fast and as sufficiently as possible to those in need runs against the concept of holding money back for triggered events. In the insurance industry, whilst weather forecasting has increasingly been used for planning customer response operations to adverse events, estimate portfolio risk and improve claims management<sup>33</sup>, companies have struggled to incorporate seasonal forecasting into actual insurance policy design and pricing, even though forecast availability goes back several decades<sup>34</sup>.

When considering the private sector, it might be beneficial to consider how companies have contributed to disaster risk reduction (DRR) efforts in general, to see what lessons might be learned for extending this to AA application. The AA community should build on previous work boosting public-private sector cooperation in DRR finance<sup>35</sup>.

A 2014 report 'Best Practice Case Studies on Private Sector Engagement in DRR' provides early examples in sub-Saharan Africa, Indonesia and the Philippines<sup>36</sup>. Entry points and mechanisms are illustrated through which the private sector can engage in preparedness. Established business cases should be able to be extended to AA. [More up to date examples must be available]. Greater emphasis on cash transfer programming through (shock responsive) social protection schemes may make such engagement easier to facilitate.

For example, the actions of large private sector companies such as Coca Cola, Nestle and proctor and Gamble in event response following Typhoon Haiyan/Yolanda in 2014 received significant press and government attention<sup>37,38</sup>.

Globally, The Coca-Cola Company and the International Federation of Red Cross and Red Crescent Societies (IFRC) also have a partnership to enhance their collaboration on disaster preparedness and response in 50 countries around the world.<sup>39</sup>

Private philanthropy foundations should also be guided to AA preparedness and readiness expenses, building on their increasing role in the development landscape<sup>40</sup>. A climate framing may assist this process. Philanthropic activities relating to Islamic financing could also be developed.<sup>41</sup>

Development arms of large corporations such as Google should also be encouraged to continue and build upon engagement with the AA community.<sup>42</sup> The technological aspect of initiatives such as Google flood forecasting initiative<sup>43</sup> should also build synergies with such engagement. Exploiting artificial intelligence and machine learning could also allow AA to be extended by geography and peril with next generation developments, and suggested by Give Directly's work in Covid response, building social registries in Togo.<sup>44</sup> Ethical concerns must of course be foremost.

33 Carrier Management (2018): How Insurers and Reinsurers Can Proactively Manage Weather-Related Claims

34 UCL (2005): Hurricane forecasting breakthrough

35 PLACARD (2019): Boosting public-private sector cooperation in DRR finance

36 Humanitarian Futures (2014): Best Practice Case Studies on Private Sector Engagement in DRR

37 PHILIPPINES TYPHOON HAIYAN – RESPONSE REVIEW (2014)

38 Congressional Research Service (2014) – Typhoon Haiyan (Yolanda): U.S. and International Response to Philippines Disaster

39 The Coca-Cola Company (2013): Coca-Cola Contributes More Than US\$2.5 Million In Typhoon Relief Aid

40 OECD: The role of philanthropy in financing for development

41 Bond (2019): Islamic social finance: the future of humanitarian partnership?

42 The Keyword (2021): Collaborating with the UN to accelerate crisis response

43 The Keyword (2021): Expanding our ML-based flood forecasting

44 GiveDirectly (2021) – Study: AI targeting helped reach more of the poorest people in Togo



Climate finance, in the form of funds such as Green Climate Fund (GCF) and Adaptation Fund need to be made more risk-sensitive: opportunities may exist for supporting AA activities. Loss and damage discourse, while still nascent<sup>45</sup>, may also provide similar avenues as part of a diversified response in the future.

On combination of CDRFI instruments with anticipatory action, a range of hybrid activities are currently being explored, including Start Network’s Start Ready, a ‘new humanitarian funding paradigm.’<sup>46</sup> The report Financing the Forecast-Based Early Action Protocols<sup>47</sup> examines alternative options that may be available to the International Federation of Red Cross and Red Crescent Soci-

eties (IFRC) when funding its Early Action Protocols through the forecast-based action by the DREF. A number of different options are available, as shown below, to finance the risk of funds being insufficient to cover all early action costs. Each has different implications, such as who would own the risk, the certainty with which needs would be met, and practical considerations around operational feasibility. Whilst ‘diversification’ has profoundly different meanings for insurance companies than for NGO internal funding pots in terms of efficient use of capital, nevertheless this exploration hints and a wave of creative exploration to come around CDRFI that extends to AA activities.

**Figure 1:** List of potential options by risk-holder

1. IFRC retains the risk	2. Risk is transferred to donors	3. Risk is transferred to external market
<ul style="list-style-type: none"> <li>a) Guarantee fixed sum with discretionary top-up (e.g. CHF 250k + CHF 200k)*</li> <li>b) Guarantee full payment for part of the year (e.g. first nine months of financial year) and reduce guarantee for the remainder of the year if necessary**</li> <li>c) Guarantee full payment if funds are sufficient and reduce guarantee proportionally if insufficient**</li> <li>d) Transfer funds from the DREF to fund the shortfall*</li> <li>e) Self-insure within IFRC e.g. establish a captive style arrangement*</li> </ul>	<ul style="list-style-type: none"> <li>f) Donor agreement to provide an additional donation or bring forward a planned future donation to meet any shortfall that arises*</li> </ul>	<ul style="list-style-type: none"> <li>g) Excess of loss cover from a commercial insurer or reinsurer**</li> <li>h) Alternative investment vehicles e.g. catastrophe bonds, insurance linked securities**</li> <li>i) A non-traditional philanthropic or impact investor commitment to funding any shortfall*</li> </ul>

\* Short-listed options \*\* Options not considered in detail

45 IIED (2021): Tackling loss and damage: lessons from vulnerable countries  
 46 ARTEMIS (2021): Humanitarian risk transfer in focus at COP26 with Start Network & IDF partnership  
 47 UK Government Actuary’s Department (GAD). (2021) ‘International Federation of Red Cross and Red Crescent Societies’ Forecast-based Action by the DREF. Financing the forecast-based Early Action Protocols.’ Centre for Disaster Protection, London.



**Guiding Question 1d**

**How can regional risk pools better incorporate anticipatory action?**



## First contribution

# How can regional risk pools better incorporate anticipatory action?

**Author:** David Maslo, Head of Business Development at ARC Ltd.

**Institutional affiliation:** African Risk Capacity Limited (ARC Ltd.)

**Contact details:** dmaslo@ltd.arc.int

## Anticipatory insurance – a ‘smart’ approach to DRF in Africa

Striking before a hazard becomes a climate change disaster, the anticipatory insurance pilot driven by OCHA and ARC is set to positively influence the broader DRF community, while fostering linkages across humanitarian finance and DRF, and helping funds go further in light of decreasing national budgets and aid.

From Madagascar’s deadly tropical storms to the more than 20 million people in Somalia, Ethiopia and Kenya struggling to find enough to eat, Africa bears the scars of climate change despite it being the lowest contributor to the greenhouse gas emissions that fuel it.

Of the 10 countries most vulnerable to climate change, seven are in Africa. Almost half its population lives in extreme poverty, and over 281.6 million people are hungry.

With numbers like these there can be little debate that the rising frequency and intensity of climate-change-induced events across Africa requires an innovative approach and smarter collaboration which responds much faster to extreme weather events than traditional humanitarian approaches.

Put plainly by **Mami Mizutori**, Special Representative of the Secretary-General for Disaster Risk Reduction at the United Nations Office for Disaster Risk Reduction (UNDRR): “If we act early, we act smart”.

We can act early, leveraging technological advances and existing solutions to forecast, plan for and respond to natural hazards before they become catastrophes.

“Trigger, money and action” – that’s the framework used by the UN Office for the Coordination of Humanitarian Affairs (OCHA) to explain anticipatory action, which relies on the ability to forecast the potential impact of disasters using science and data to trigger pre-determined actions which are pre-funded to protect vulnerable communities from displacement, disease, loss of livelihood, etc. before they reach crisis levels.

But anticipatory action needs to be funded at scale. This is where disaster risk financing (DRF) instruments intended for governments of vulnerable countries, such as insurance and risk layering are useful, as they ensure that different financing instruments match the requirements of different levels of risk.

Take that a step further and overlay how these diversified instruments could impact levels of risk at different points in time – this time-layering approach is already being tested on the ground in Africa by OCHA and African Risk Capacity. OCHA is also bringing its experience and learnings from anticipatory action to the insurance sector.

## An alternative risk solution

What would it have meant for the starving millions in the Horn of Africa if anticipatory action had been taken? If countries like Somalia, Ethiopia and Kenya had benefited from the release of funding to fuel action before the peak impacts of a predictable crisis?

The drought in the Horn of Africa is but one climate-related emergency the continent has faced this year. In 2022, ARC Ltd. has already paid out US\$59.6m and covered 18m individuals in countries like Mali, Malawi and Madagascar.

These payouts that were triggered by a set of pre-determined parameters, due to the countries having signed up for a drought risk pool run by the African Risk Capacity (ARC) Group, a specialised agency of the African Union.

ARC Ltd., its financial affiliate and the premier institution for DRF on the continent, links insurance payouts to contingency plans to ensure a faster and more targeted anticipatory action response.

Since its inception in 2014, ARC Ltd. has shown that the parametric insurance model works and is impactful, as demonstrated by its payouts of US\$124,3m in claims from eight risk pools covering over 100 million people and transferring US\$1bn risk.



At the heart of ARC's work, African governments develop contingency plans outlining how payouts will be spent to deploy emergency relief quickly, often within days, instead of waiting for months until damage assessments are complete. ARC further helps governments improve their planning, preparedness and response to natural disasters.

The payouts assist governments to support their affected populations quickly, helping them rebuild and recover from the effects of a drought or tropical cyclone and ensuring they have the means to bounce back swiftly instead of resorting to negative coping mechanisms.

### Piloting anticipatory insurance: a time-layering approach

ARC's existing drought product is forecast-based as it models the short- to medium-term impact of the current drought on the vulnerability of populations, that is the number of people who will be affected in the lean season, allowing contingency plans to be tailored to respond swiftly and in a focused way.

Payouts are made at the end of the agricultural season to respond within several months to the disaster, more than doubling the value of each dollar disbursed compared to traditional humanitarian aids.

Despite this, there could be ways to detect drought earlier and speed up the payout process to anticipate the impact of drought even further. The cost of response at the end of the agricultural season could be further mitigated if we respond earlier, thus reducing the vulnerability of populations under the usual ARC trigger.

Working with OCHA, ARC is marrying anticipatory action and insurance approaches, piloting the concept of anticipatory insurance in Malawi and Zambia by modifying its existing products to develop an innovative parametric insurance solution that enables payouts right after the sowing window. The amount paid would be calculated on the level of failed sowing and the forecasted impact of these failures by the end of the season.

The current ARC Ltd. drought policy does cover drought impacts in the sowing window, but it does so along with other shocks that may materialise during the season, offering coverage from November to April, with activities, including planning, lasting up to six months after the payout, starting typically in May.

In the case of the anticipatory insurance product, coverage is for November up to mid-January with an immediate payout still within the month, and activities taking place from February to April.

The implementation is capped at three months and approval and planning processes are streamlined to enable quick action. Emphasis is also placed on preparedness and making contingency planning more anticipatory, provided for within the ARC programme and supported by OCHA.





This is particularly critical to create the virtuous feedback loop that will compound the effect of anticipatory action until the end of the season up to the lean season.

In this way anticipatory insurance will offer dedicated sowing protection by, for example, distributing seeds for subsistence crops, e.g., potatoes that can be sowed later in the year. Farmers could grow crops mitigating the considerable impacts that late rains or periods of dryness during the start of the rainfall season have had on food and income security.

The AI product used helps with risk management and impact mitigation, which means that the conventional drought policy can be used instead for addressing residual impacts. Potential advantages are that countries will not have to transfer as much risk into the market and insurance will also be made more accessible.

To be successful, these actions require an even higher level of preparedness, both operationally and financially, than ARC's usual parametric insurance because the time for action is extremely narrow. Part of OCHA's mandate is to support governments and partners with enhanced contingency planning and preparedness, which will be harnessed in the pilot.

For financing this, a third trigger based on pre-seasonal forecast could activate anticipatory action so that, for example, if the forecast is bad at the beginning of the agricultural season, a provision on alternative seeds is made.

Finally, there is an opportunity for ARC to further micro and meso insurance schemes, with well-identified beneficiaries and supply chains to complement sovereign policies by bringing operational speed and transparency into the Disaster Risk Management framework.

Great progress has been made in 2022 and a foundation set to effectively test and generate proof that anticipatory insurance works, but the clear benefits are already there: most notably its potential to get ahead of peak humanitarian impact by ensuring earlier loss calculation, payout and fast implementation, still within the season.

And while currently there is little to no evidence of anticipatory insurance, pilots like those OCHA and ARC are pursuing on the ground help to shape the financing system and pave the way for further much-needed reform and innovation.

We have only just begun to explore an innovative approach to anticipatory action that could positively influence the broader DRF community and turn the conversation from counting the cost of climate change to counting what we have managed to save by acting smart.

## Second contribution

**Author & Institutional affiliation:** Pacific Catastrophe Risk Insurance Company (PCRIC)

**Contact details:** rc@pcric.org, ceo@pcric.org

### Background

- › Anticipatory Action refers to actions taken before a crisis hits. This is solely to prevent or reduce potential disaster impacts to a shock, or before acute impacts are felt. For PCRIC, shocks include Tropical Cyclones, Earthquakes and earthquake induced tsunamis. Potential shock to be considered are flooding via heavy rain and drought.
- › UN OCHA has a Anticipatory Actions Framework, which states that there are 3 elements of AA:
  - › Established triggers
  - › Pre-arranged financing
  - › Pre-arranged Humanitarian Actions
- › Under AA, assistance is provided before the disaster strikes to allow beneficiaries to source whatever goods/services they require immediately after a disaster.
- › As a risk pooling entity, PCRIC already incorporates anticipatory actions as it already meets 2 of the 3 elements of OCHA AA Framework. These include the establishment of triggers and pre-arranged financing.
  - › Triggers include:
    - › Declaration of State of Emergency
    - › TC is at Category 3 and above
    - › Earthquake at above 5/6 on the Richter scale
    - › Tsunami
  - › Pre-arranged financing
    - › Currently, PCRIC member countries pay their insurance premiums for every season (Nov – October) with apportionment of premiums towards TC and EQ/Tsunami. If triggers are met for these disasters, the payout is made based on the apportionment.
- › To better incorporate AAs, regional risk pools such as PCRIC could consider avoiding delayed response towards insurance payout, such as making insurance payouts within 10 days, in comparison to other forms of assistance which could take 15 days to 3 months to disburse funds to governments.
- › To ensure that funds reach PCRIC's targeted beneficiaries, it could specifically state in the Contingency Plans how and where

it would want the insurance payouts to be used. Currently, utilization of insurance payout is at the discretion of Government, with restriction on utilization of fund aimed at the negative list as per the UN requirements (e.g. guns, ammunition, drugs, etc. PCRIC could arrange with Government to use the insurance payout for timely humanitarian response in the form of cash transfers, food rations, water tanks, etc., immediately after a disaster. However, PCRIC is not mandated to provide humanitarian response, which is a service that is normally provided by NGOs. If regional risk pooling institutions also opted to participate in humanitarian response activities, there are likely to be some barriers to giving cash transfers, which could include the capacity of the system to identify and pre-register beneficiaries, as well as the capacity of the government or the nominated service provider to execute the cash transfers.

- › Risk pooling and anticipatory action-related instruments are similar in the sense that they target the relief phase of the disaster cycle (within 30days). Both have triggers; however, risk pooling has a pre-determined model that pays insurance after the disaster, whilst AA practices a different modality where payment to beneficiaries is effected before the disaster/crisis hits.
- › Currently, regional risk pools like PCRIC only offer insurance which meets two elements of the AA framework. To better incorporate AA, PCRIC could also consider offering products beyond insurance e.g. regional savings. However, this would require a change in organizational structure to a segregated entity, as well as a change in their mandate to also directly offer humanitarian response activities, hence meeting the third element of the AA framework. Taking into consideration political economy, this would also increase the political visibility of government ministers to their voters' post disasters where humanitarian response in the form of cash transfers, food rations or water tanks could be provided just before the disaster triggers are activated.
- › Regional Risk pooling could also better incorporate AA through capacity building on the concept of AA and how some of their products could factor AA so ensure that the impacts to the disaster shocks are not as severe as they could be, post disaster. Continuous capacity building on AA will strengthen the ability of PCRIC and citizens to manage their risks before and after the shocks.





## Third contribution

**Author:** Constance Wong

**Institutional affiliation:** Willis Towers Watson

**Contact details:** [constance.g.wong@willistowerswatson.com](mailto:constance.g.wong@willistowerswatson.com)

## Definition of AA

### Challenge/Problem/Gap

Anticipatory action can reduce the negative impacts of climate shocks by implementing targeted measures to increase preparedness, and thus reduce financial needs after an event. **Regional risk pools form a key component of the disaster risk financing landscape and are therefore important to consider in the context of how anticipatory action mechanisms can be delivered.** Currently, risk pools tend to focus on responding after an event, and although they generally do so very rapidly, this question seeks to explore whether/how they could respond before an event.

### Mandate of risk pools and their capacity

Risk pools currently provide emergency liquidity following shocks. They also support their members in the development of more holistic disaster risk management and financing. Some risk pools explicitly can encourage disaster preparedness as in the case of ARC for example, where countries are required have detailed plans in place. Risk pools also have access to modelling data that could be useful for anticipatory action, and must continue to innovate to meet the needs of their member states and AA is one route to doing so.

### Considerations for implementation

#### Type of hazard and forecast reliability

The ability of risk pools to integrate anticipatory action is heavily dependent on the type of hazard the pools cover and the reliability of forecasts associated with that hazard. Drought is commonly explored, as forecasts exist that can predict drought months in advance, and droughts themselves tend to be slow-onset. For rapid-onset hazards such as hurricane, the forecast for single storms is constantly changing, and therefore the window of time in which anticipatory action can be undertaken is very short. For hurricanes, issues in forecast reliability include the actual storm track (whether a specific location will be affected) as well as the intensity of the storm. It is not until two days out that this can be predicted with a relatively high degree of reliability, and the severity of the storm is not known with certainty until hours before it lands.

#### Timing of disbursement

Risk pools already tend to confirm their disbursements rapidly (within days for CCRIF), meaning that the additional benefit of an anticipatory action trigger is limited for fast-onset hazards. For hurricane, for example, a trigger one day before the landing of the storm would not make a difference to the financial flows received from an entity such as CCRIF. Any money triggered ahead of an event would not arrive until after the event. With certainty as to the arrival of money, however, it is possible to initiate actions knowing they will be funded later on.

#### Use of pay-outs

Any actions undertaken with limited forecast certainty need to be low-regret. Many of these types of actions are actions that should already be taken by hurricane-exposed countries before the start of the hurricane season as part of general preparedness. Some more targeted actions considered may be cash disbursements to vulnerable families; however, in a hurricane context, the ability of this cash to be put to use when shops are closing down and may have limited stock needs to be carefully planned. Pay-outs would work best to complement existing initiatives that have the infrastructure in place but need the funding to be able to rapidly take action.





### Practicality

Should anticipatory action financial triggers be explored, risk pools offer existing infrastructure that can be built on once forecast and modelling requirements have been overcome, thus reducing the operational and regulatory hurdles. Adding on or integrating an early action trigger for countries that already buy a policy will be easier than starting from scratch. It could guarantee funding for activities undertaken by countries based on a forecast, thus encouraging taking action ahead of disasters and reducing the financial considerations of the event not materialising in the same way as forecasted. An early action financing trigger would help mainstream forecast-based decision-making and thus anticipatory action, with set forecasts leading to set actions. In implementing this, however, it is still important to balance this with the cost of cover, which can be high if there is frequent triggering. A trigger point must be carefully chosen to align with the policyholder's risk tolerance and disaster preparedness plan as well as affordability.

### AA for Ecosystem Resilience?

- Financing for natural assets is often overlooked, despite the ecosystem services they provide and importance they can have for an economy and its people. Disaster risk financing is providing new forms of financing for them, demonstrated through initiatives such as the [MAR Insurance Programme](#), which insures coral reef sites from hurricane damage in different countries of the Mesoamerican Reef.
- Coral reefs face a multitude of threats, and in some cases, impacts are easy to predict. Ability to predict coral bleaching is fairly well-developed, with [NOAA Coral Reef Watch operating a global 4-month coral reef bleaching Outlook system with a high hit rate and low miss rate](#). A recent [study](#) by Nature shows that ability to predict marine heatwaves is fairly sophisticated, with forecasts reliable up to 12 months before.
- Ecosystems are a key part of the picture when considering the vulnerability of countries to climate hazards, especially for SIDS. The protection of critical natural infrastructure and management of climate risk and adaptation to climate change often go hand in hand.

## Fourth contribution

**Author:** Theresa Lederer

**Institutional affiliation:** previously Vivid Economics, currently RMS

**Contact details:** Theresa.Lederer@rms.com

### Problem statement

Risk pools traditionally focus on making insurance payouts post-disaster. In addition, they are most frequently focused on acute climate impacts, and do not cover slow-onset hazards such as drought.

This narrow, specialized focus misses opportunities around:

- › Adaptation efforts to reduce disaster impacts before they occur (independent of specific forecasts/events looming – tbc if this is considered within scope of AA)
- › Early action to reduce impacts from a specific disaster before/as it unfolds (note differences between perils – wind & flood can often be forecast; other hazards like earthquakes can't). Such early action could include disbursement of funds to mitigate physical impacts (e.g. roof tie-downs), evacuation, and/or structured response planning processes which ensure effective relief efforts post-disaster
- › Impacts of chronic perils (as opposed to acute disasters) – e.g. sea level rise, drought. Risk pools typically don't provide any coverage for these long-duration, slow-onset perils at all (notable exception: ARC)

### Possible solutions

Possible solutions include aspects across two broad categories: Firstly, improved data & modelling capabilities to enable efficient and affordable coverage of a broader range of hazard coverage and trigger design; and secondly, innovations in trigger design which overcome the historical focus of action post-disaster.

1. **Data/modelling capabilities:** Using region-wide capacity and data to improve understanding of hazards and resulting needs.
  - › **Improving hazard forecasts:** better monitoring systems, improved modeling esp. of long-term weather forecasts (e.g. for drought/rainfall/heat)
  - › **Improving impact/needs forecasts:** better understanding of interactions between hazard and the impacts/needs they cause. Traditional modeling is often focused on asset damages; better understanding is needed on implications for short-term relief and longer-term livelihood support triggered by such asset damages.
2. **Explicit triggers for AA:** Moving from a trigger which is activated post-disaster only to a 'dual trigger' structure which can already be (partially) activated pre-disaster, by incorporating:
  - › **Response planning:** Making post-disaster payouts conditional on the presence of well-structured and coordinated response plans, which ensure that payouts can be disseminated and used efficiently in the aftermath of a disaster. Such plans should be checked by independent reviewers periodically, whose approval is required to uphold coverage for post-disaster payouts. Conditions could also include mandatory reviews and incorporation of learnings post-disaster, to ensure that plans are actively updated to address past shortcomings.
  - › **Non-acute hazards:** Expansion of coverage from acute to slow-onset hazards (droughts, heat waves, etc.) whose impact – in particular on vulnerable populations – is expected to significantly increase as climate changes. An affordable and robust (i.e. manageably basis risk) coverage of these hazards will rely on improved availability and use of weather forecast and monitoring data; as well as transparent education on uncertainties and limitations associated with such data (and as a result, trigger mechanisms based on them).
  - › **Pre-disaster/early payouts:** For acute hazards, post-disaster payouts can be complemented (or potentially even entirely replaced) by payouts which are disseminated pre-disaster, based on forecast information. Similarly, payouts for slow-onset hazard can be moved forward in time, when they can often be most effective in reducing impacts. More experience is needed to determine the 'optimal' size of early payouts, which balances impacts on policy pricing and/or reductions in post-disaster payouts with the scale of pre-disaster finance required to achieve a meaningful reduction in post-disaster impacts.
  - › **Rewards for effective AA:** Effective AA efforts (e.g. response planning or use of pre-disaster payouts) could be rewarded through a range of incentives, e.g. premia reductions, 'free' increases in coverage, or technical assistance. This would require the risk pool/trigger design to incorporate a set of AA success criteria, against which pre-disaster action can be evaluated, and linked to specific benefits.

## Fifth contribution

**Authors and their Institutional affiliation:** Dr Markus Enenkel, Harvard Humanitarian Initiative (HHI) &

Dr Nikolas Scherer, Anticipation Hub

**Contact details:** [menenkel@hsph.harvard.edu](mailto:menenkel@hsph.harvard.edu) & [n.scherer@drk.de](mailto:n.scherer@drk.de)

### Background – An overview

As of 2022, four sovereign catastrophe risk pools are up and running, protecting about 40 low- and middle-income countries. Total insurance coverage has reached \$1.2 billion (World Bank, 2021). The pools are the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company (CCRIF-SPC), which is by far the biggest; the African Risk Capacity (ARC), the Pacific Catastrophe Risk Insurance Company (PCRIC) and the Southeast Asia Disaster Risk Insurance Facility (SEADRIF). They provide member countries with tailored parametric insurance policies against natural hazards (e.g. flood, drought, earthquakes). Those pools share the same principles and, yet, they are all structured in a different way to serve different goals and contexts (Scherer, 2021). They have built joint reserve funds that retain first losses and transfer excess losses to the international reinsurance and capital markets.

Experience shows the sovereign risk pools work. Since their first inception in 2007, they made more than 60 payouts, totalling approximately 270 million USD. Moreover, they have been innovating to better respond to the needs of their members – also because they have been struggling with volatile memberships due to premium affordability – and reaching scale. CCRIF-SPC launched new products for fishermen and electricity companies. ARC developed insurance policies (“ARC Replica”) for humanitarian actors. PCRIC is setting up a private sector window to help domestic insurance companies access international catastrophe reinsurance markets, and SEADRIF launched a flood policy relying on satellite technology. Looking forward, those pools can continue to play a critical role in the global disaster risk finance architecture, as long as their roles and limitations are clear and they keep innovating.

As the global disaster risk financing (DRF) architectures matures, a lot of lesson lessons can be learned from other DRF tools such as forecast-based financing (FbF) and other Anticipatory Action (AA) tools to improve sovereign risk pools and develop their full potential – Some suggestion on the way forward:

### The way forward

**Link payouts to action plans:** Initial insurance policies offered by the pools (CCRIF-SPC & PCRIC) were designed akin to a budget support tool. The idea was to prevent liquidity problems by providing treasuries with quick payouts following a larger disaster (modeled to be a 1:10) event. The payout comes with no strings attached, meaning that governments – more precisely the treasury – can do with it whatever they want. They can fund disaster relief efforts (which they did in most cases, as CCRIF-SPC reports) but also any other activity. While this flexibility has its merits and its in line with their overall goal of public financial stability, experience from DRM shows that it is often not financing per se, but early, quick and coordinated action (= the objectives of FbF) that saves lives and livelihoods. This requires clarifying beforehand on who will do what, when and how. Risk pools could incentivize governance building by tying payouts explicitly to the development and implementation of contingency plans and/or offer premium discounts when policyholders do. When the trigger is met, the financing becomes available and the plan is executed. ARC offers a good example here: It asks insurance policyholders to set out audited contingency plans for how pay-outs will be spent when disasters strike. Even better would be to link payouts to anticipatory action plans – but this would require forecast-based triggers (see next point)

**Move to forecast-based triggers:** Risk pools have invested extensively in developing customized probabilistic catastrophe risk models that assess the economic impact. While such models have their value, a better and potentially life-saving approach would be to make use of models that assess the likely impact of a hazard before it materializes by using “impact-based” forecasting models, as increasingly used by humanitarians. These “impact-based” forecasting models predict the potential (humanitarian) consequences of a hydrometeorological event (e.g. severe storm), in terms of its effects on people, infrastructure, etc. Simply put, they link real-time climate and weather data to exposure and vulnerability data and show where needs are most likely the highest. These types of forecasts are designed to provide detailed information on who or what is exposed and vulnerable to the particular hazard.

Migrating to an impact-based paradigm trigger is not without challenges; it requires detailed hazard, vulnerability and exposure data and an agency that can provide robust and credible country-specific forecasts. However, risk pools have done an excellent job in building datasets on physical exposure. The Pacific Catastrophe Risk Assessment and Financing Initiative, which preceded PCRIC, has systematically collected data at the household level throughout many Pacific Island countries using earth observation technology. Also humanitarians have been working closely with national hydro-met agencies, local experts, government representatives and communities at risk, to develop datasets and impact-based forecasts (which in some cases forms the basis of FbF). There is potential to exploit synergies and learnings with support of initiatives and excellence centres that are focused on increasing the use of impact-based forecasting models such as UN OCHA's Center for Humanitarian Data, WMO/UNDRR Centre of Excellence on Climate and Disaster Resilience, NASA Disaster Program, the Netherland's Red Cross 510, to name but a few.

**Allow for more effective collaboration with frontline actors:** While some risk pools are working with frontline actors, collaborations could be extended further to improve targeting and the accountability of support. Red Cross Red Crescent (RCRC) National Societies are not only auxiliaries to public authorities, but they also have also tremendous technical expertise for preparedness planning. They could help developing or improving contingency plans and support their implementation. Due to their extensive reach into local communities, they are well positioned to develop more locally-owned solutions and reach geographic areas which are more difficult to access. Local actors and communities – including women and minority groups – should inform the design of action plans from the very beginning to assure that activities funded by a payout are appropriate to make a difference at scale.

**Embedding scrutiny and share learnings:** DRF is a relatively new field, and there is a growing but limited evidence of impact of the various instruments or established 'best practice'. For instance, people working on AA are still in 'learning' mode, scrutinising the design and implementation of different approaches in order to understand what works, what does not and why. By sharing monitoring data, publishing rigorous evaluations, DRF community can collectively learn from experience, build up a global body of evidence. This will ensure that DRF initiatives result in maximum improvements to the lives of the poorest and most vulnerable people, help to inform discussions around risk layering (which to date seems to be more a conceptual framework as, in practice, many countries are not applying a risk-layering approach) and will also help donors justify making more and greater investment to bring DRF to scale.



## Works cited

- › Scherer, Nikolas (2021). *Insuring against Climate Change – The emergence of regional catastrophe risk pools.* (paywall; available upon request)
- › World Bank (2021). *Sovereign risk pools - 15 years and still more to come*

## References / Further reading

- › Anticipation Hub Working Group "Earth Observation for Anticipatory Action"
- › Anticipation Hub Evidence Database
- › 510 Initiative (Netherland Red Cross)
- › Centre for Humanitarian Data
- › Centre for Disaster Protection (2021) – 7 Ways to unlock effective DRF
- › InsuResilience Strategic Evidence Roadmap on CDRFI
- › Start Network (2021) ARC Replica Payout Senegal - internal evaluation

**Guiding Question 1 e**

**What are the top 3 most promising technologies/solutions to scale up risk financing for anticipatory action?**



## First contribution

# What are the top 3 most promising technologies/solutions to scale up risk financing for anticipatory action?

**Author:** Susanna Acland, Barnaby Willitts-King

**Institutional affiliation:** GSMA (Mobile for Humanitarian Innovation)

**Contact details:** sacland@gsma.com; b.willitts-king@gsma.com

Mobile-enabled technology has a key role to play in scaling up risk financing for anticipatory action, by leveraging its scale it has the power to contribute to preparedness ahead of disaster. For example, robust mobile networks can facilitate access to information and coordinate the response between governments, civil society and the international humanitarian community before a disaster. Mobile connectivity and solutions can strengthen access to communication and information for communities affected by crises. Mobile channels can be leveraged to effectively pre-position the distribution of cash and mobile data can be leveraged as population data for risk mapping. , established digital ecosystems and enabling environments are paramount to the effectiveness and appropriateness of certain technologies to provide scale to risk financing solutions; where one solution shows significant promise, it may not be appropriate for a different context. Digital solutions must also be conscious not to create or enhance inequalities that are reflected through digital inclusion, particularly where end users are involved or through reproducing existing inequalities and bias in data sets. Some promising examples of promising technologies for scaling risk finance for anticipatory action are detailed below according to the following three themes[1]:

1. Understanding risks and hazards through scientific modelling to quantify risks and agree triggers and thresholds
2. Planning interventions in advance
3. Pre-positioning funding so action can occur in anticipation of a crisis

## Possible Solutions

### 1. Understanding the risks and hazards through scientific modelling to quantify risks and agree triggers and thresholds

#### Data for EWS and risk mapping (predictive analytics)

- There is a range of solutions that harness the power of data to predict and quantify risks and hazards. For example, data from commercial microwave links (CML data [2]) provides a unique opportunity to use existing mobile network infrastructure to produce high resolution rainfall observations in near real-time, data that is typically not available in

LMICs. Space technology (i.e., satellite imagery and data) is often used for predicting natural hazards.

- Community level feedback and data from people in high-risk areas, often collected through mobile channels, can be used for determining and assessing key indicators. For example, WFP's (in partnership with Viamo) Mobile Vulnerability Analysis and Mapping (mVAM [3]) uses IVR and SMS to gather data via mobile in situations of crises to assess famine vulnerability, improving cost, time and enumerators' security. Mobile can also be used feeding community level data into national and international tracking systems.

### 2. Planning interventions in advance (pre-plan and pre-costing)

#### Data for risk mapping

- Data generated by mobile phone use (e.g., CDRs<sup>48</sup>) can provide a dynamic, near real-time picture of the mobility and movement of millions of people, where this can be done responsibly (for example by anonymizing data) and in line with national data protection rules. This can help decision makers plan interventions in advance by understanding and assessing scale and location of displaced people. This information can also be used to predict how a population will move during a period of interest and plan accordingly – example of Flowminder [4]
- Effective risk communication (e.g., alerts) is crucial for enabling communities to take early action as well as informing those affected of the appropriate actions to take and how to access support in advance of crises. Mobile channels can be harnessed to scale dissemination of such information but complementary channels need to be explored to avoid exclusion (for example TV/radio for people who do not use mobile phones).

<sup>48</sup> CDRs are automatically generated by mobile network operators for billing purposes and created for each pair of SIM cards at the time that a call, SMS or mobile data session is initiated. Importantly, CDRs include an identifier of the cell tower to which the event was routed (usually the closest cell tower), meaning that the movement of SIM cards can be tracked over time and across areas.



### 3. Pre-positioning funding so action can occur in anticipation of a crisis

#### Mobile technology/mobile money for scaling cash and voucher assistance (CVA)

- › The ubiquity and scale of mobile networks have made mobile money systems is often one of the most viable options for a CVA distribution model. Ensuring these systems are set up in advance of crises can enable timely and efficient risk finance and early disbursement at scale, and facilitate more dignified and self-reliant approaches to the provision of humanitarian aid. To do this it is key to build relationships/partnerships between Mobile Network Operators (MNOs) and humanitarian organisations. See case study of Burundi [5].

#### Recommendations / Guidance

- › Established digital ecosystems and enabling environments are paramount to the effectiveness and appropriateness of certain technologies to provide scale to risk financing solutions; where one solution shows significant promise, it may not be appropriate for a different context.
- › Digital solutions should be designed so as not to create or enhance inequalities or reproduce bias in data sets particularly where end users are involved.
- › Having partnerships in place is key for setting up the right systems in advance. For example, partnership between Mobile Network Operators (MNOs) and humanitarian organisations enable the ability to leverage data when needed and with appropriate and predetermined safety, ethical and privacy measures in place.
- › In order to build the right technical capacity within the sector, there is a skills shift needed from logistics management towards data/predictive analytics (including proper safeguarding policies), partnerships with the private sector for MFS and working with finance to ensure people understand mobile money. See IRC paper [6] for recommendations on organisational shifts and new skills.

#### Foundational recommendations for any digital programming:

- › It is critical that the appropriate data protection and privacy measures are put in place and policies adhered to throughout the entire process of any digital intervention, with data ethics incorporated from the planning and design stages.
- › Understanding the digital landscape prior to designing or implementing digital solutions is critical to their success and scalability, for example having the required infrastructure, connectivity, coverage and an enabling regulatory environment as well as phone access, usage, preferences and digital skills of users where they are concerned. The Connectivity Needs and Usage Assessment (CoNUA [7]) toolkit can be used by organisations to undergo such assessments before providing products and services in diverse humanitarian contexts.
- › There are a host of potential barriers, from low digital literacy and low handset penetration to household and community behaviors around mobile usage. Considerations of digital inclusion, such as

gender and disability gaps in phone accessibility, are essential to reach marginalised groups and to avoid enhancing existing inequalities when doing risk communication and in early response cash programming. This risk also applies to mobile or digital data used for risk mapping, and using representative data is essential to avoid reproducing and enhancing marginalisation.

### Works cited

- › START network framework [1]
- › GSMA (2021), [Digital Innovation for Climate-Resilient Agriculture](#) [2]
- › mVAM [3]
- › Flowminder, [Flowkit: unlocking the power of mobile data for humanitarian and development purposes](#) [4]
- › GSMA (2020) [Mobile money enabled cash assistance: User journeys in Burundi](#) [5]
- › GSMA (2019), [Navigating the Shift to Digital Humanitarian Assistance: Lessons from the International Rescue Committee's Experience](#) [6]
- › GSMA (2021), [The Connectivity, Needs and Usage Assessment \(CoNUA\) Toolkit](#) [7]

### References / Further reading

#### GSMA resources

- › GSMA (2022), [Typhoon Rai Response: The role of the mobile industry](#)
- › GSMA (2021), [The Climate Crisis: Mobile-enabled solutions in humanitarian emergencies](#)
- › GSMA (2020), [Partnering During Crisis: The Shared Value of Partnerships between Mobile Network Operators and Humanitarian Organisations](#)
- › GSMA (2019), [Mobile money enabled cash aid delivery: Essential considerations for humanitarian practitioners](#)
- › GSMA (2019), [Mobilising cash and voucher assistance programmes: The case for mobile money](#)
- › GSMA (upcoming 2022) [Flowminder case study](#)
- › GSMA (2020), [Building a Resilient Industry: How Mobile Network Operators Prepare for and Respond to Natural Disasters](#)

#### Others

- › SHEAR (2021), [Using mobile phone technologies for Disaster Risk Management](#)



## Second contribution

**Author(s):** Tara Chiu, Sophie Javers

**Institutional affiliation:** The Feed the Future Innovation Lab for Markets, Risk and Resilience at the University of California Davis

**Contact details:** tlchiu@ucdavis.edu, sejavers@ucdavis.edu

### Commitment to Innovating, Testing & Verifying Quality to Promote Successful and Sustainable Scaling of Anticipatory Risk-Management Tools

Despite increasing evidence that anticipatory risk management tools can help smallholder farmers both avoid costly coping strategies when shocks occur and enable farmers to make productive investments, there are considerable challenges and constraints to successfully and sustainably scaling up these tools.

#### Measurements and Tests of Quality and Reliability

One of the main barriers that stymie efforts to scale products is

inconsistent quality in design of these tools. The success of anticipatory action is predicated on the reliability of the tool to successfully move resources from a time when it is available to beneficiaries to a time when it is most desperately needed. Any products that consistently fail to achieve this may do more harm than good (harm both to intended beneficiaries and to the latent market for high-quality products).

Risk management products – especially index-based products – are inherently vulnerable product failure. Poorly-designed products often fail to pay when farmers experience losses. In these cases, farmers have not only lost production, but the price they paid for the premium. Moreover – they may have made investments or taken credit with the confidence they got from the promise of risk protection, only to face increased losses and/or default when the product fails to offer the promised benefits when a shock occurs. Fail-prone products and products that cannot demonstrate safety should not be scaled.

To successfully scale high-potential risk management tools, we must utilize available technologies and solutions that confront and address these pitfalls head-on. Solutions to overcome potential pitfalls and maximize potential benefits include innovative approaches to both index design and contract design, as well as standardized testing and verification of quality.

#### Innovations in Index Design

Satellite technology has been increasingly valued in creating more accurate indexes and forecasting that allow for speedy risk financing payments. Additional innovations continue to be tested to further improve and refine index design. Increased quality and availability of satellite-imagery, as well as new approaches to loss estimation such as picture-based insurance (PBI) offer increasing opportunities to design high-quality products at lower prices.

#### Innovations in Contract Design

When the weaknesses and failures of these tools are understood and acknowledged, products can be designed in ways that maximize potential benefits and minimize harm. Because any index relies predications and/or estimations, the possibility of product failure – even with high-quality, sophisticated index design – is unavoidable. Contract fail-safes can be designed and incorporated to offset these weaknesses. For example, research in Tanzania





and Mozambique tested an “audit rule” in which farmers could petition for a crop-cutting confirmation audit when they feel that the satellite-based index failed to trigger appropriately.

### **Innovations to Ensure Quality**

While both innovations in index design and in contract design may dramatically improve the quality, value, and scalability of products and tools, application of these innovations still do not guarantee quality or safety. There is currently no industry-agreed approach to testing and verifying a “do no harm” quality standard. In response to this gap, the Feed the Future Innovation Lab for Markets, Risk and Resilience has proposed a Minimum Quality Standard (MQS) for agricultural index insurance that tests whether products do not leave families worse off for having purchased them. Quality standards protect both consumers from harm and market actors from unfair competition with low-quality products. Failure to protect both consumers and markets renders these types anticipatory tools and interventions unsustainable and unscalable in the long-run.

### **A Call for Commitment to Quality Standards**

Successful scaling of risk management tools – especially index-based risk management tools that are more susceptible to failure – requires agreed-upon industry standards that provide assurances that these tools at a minimum do no harm. In addition, consumer and industry protections through an independent, third-party certifier of product quality is needed to achieve and sustain scale.

**Widespread participation and support for standardization is needed from all insurance stakeholders – public and private – to achieve sustainability and scale.**

### **Further Reading**

- › **Policy Brief: A Minimum Quality Standard (MQS) to Ensure Index Insurance Contracts Do No Harm**
- › **Policy Brief: Improving Index Insurance for Small-Scale Farmers in Developing Economies**

An aerial photograph of a rugged coastline. The water is a vibrant turquoise color, contrasting with the dark, layered rock formations. A waterfall cascades down a rocky cliff on the left side. The surrounding land is covered in dense green forest. A large, semi-transparent white shape is overlaid on the top left of the image, containing text.

## Workstream 2 Guiding Questions

What are opportunities to overcome siloed approaches and align different CDRFI & AA initiatives?

# 2

**Guiding Question 2 a**

How can we move donors from supporting instruments and programmes towards financing a more integrated 'strategy' at the country level?



## First contribution

# How can we move donors from supporting instruments and programmes towards financing a more integrated 'strategy' at the country level?

**Author:** Theresa Lederer

**Institutional affiliation:** previously Vivid Economics, currently RMS

**Contact details:** Theresa.Lederer@rms.com

## Problem statement

Developing countries typically receive support across a range of a) different donors, and b) different initiatives. Generally, these initiatives divide into two types:

- › Targeted support for individual projects which impact a specific geographic area, population group, asset, and/or hazard; or
- › Broader strategic support to improve capabilities and policy at a higher level (e.g., sectoral/national/regional)

However, efforts frequently miss opportunities to create alignment, leverage synergies, and ultimately maximize strategic impact across both different initiatives of the same donor, as well as contributions across different donors.

## Possible solutions

Possible solutions span two broad categories: Firstly, improved coordination of activities by any single donor organization; in particular, consistent integration of project-level support with strategic initiatives the donor organization is providing. Secondly, improved coordination across different donors in order to reduce duplication and improve complementarity of efforts towards a clear set of shared strategic objectives.

### 1. Within-donor coordination:

- a. Align project selection with strategic priorities & initiatives: When selecting individual projects to support, a strong link to – and complementarity with – a project to the organization's broader strategic priorities can be made an important, and consistently used, selection criteria. Whilst such alignment is generally targeted by donor organizations, the consistency of how it is implemented in practice can be further strengthened by a clearer definition of assessment criteria and increased weight given to such criteria.

- b. Consider interconnected and systemic risks in early project selection: Donors can give increased weight to strategic and systemic considerations when reviewing project-level initiatives they may support. For example, decisions around whether to support the building of a particular infrastructure asset may be influenced by the level of exposure this specific asset may have to climate risks. However, this asset is likely part of an interconnected system (for example, a road network), and the risk to the asset therefore impacts the reliability of the broader infrastructure services this system provides. Taking this system-wide view, and prioritizing projects which effectively reduce risks across a system – rather than being particularly well-designed to manage risks at an asset-level – can help to maximise the impact individual, smaller scale projects can have on progress towards broader strategic goal.
- c. Leverage strategic initiatives for project origination: Strategic initiatives can be at risk of being conducted in a vacuum. However, there are opportunities to systematically leverage them to identify and/or design projects which are closely aligned with strategic efforts – for example, by attaching a requirement to integrate a minimum number of project implementations (which may be developed or identified within an existing pool of projects supported by the donor) within strategic engagements.
- d. Foster organization-wide learning & exchange: Knowledge and experience can easily become disconnected within individual organizations, as insights are gained ad-hoc across different focus areas and departments (see point 2c below for similar challenges across different organizations). Fostering a structured way to exchange knowledge, lessons learnt and best practices across an organization – e.g. through dedicated working groups or regular knowledge events – can make an important contribution to create, and align activities around, a shared vision for an integrated climate strategy.



2. Cross-donor coordination, to maximize impact across initiatives led by different development / donor organization:
  - a. Agree a joint framework to define objectives and track progress: At a high level, many donor organizations pursue similar objectives. However, the specific interpretation of such high-level objectives (e.g. “resilience”, “reduction in vulnerability”, “inclusivity”) can differ notably across different actors – frequently without an intention or understanding of such differences. Developing a shared understanding of objectives across different organizations is an important first step towards successful coordination. It also allows progress towards the different objectives to be tracked and shared in a transparent and consistent manner, enabling in turn a shared understanding of outstanding gaps and needs.
  - b. Align on common data standards: Effective decision making relies on robust underlying data. In the case of climate resilience, such data often includes climate hazard analytics, spatial data on the distribution of people and assets, socioeconomic variables, etc. Donors play an important role in creating such datasets, and promoting their use by local stakeholders in recipient nations / organizations. However, data is frequently generated using different formats, assumptions and variables; leading to duplication and lack of interoperability of outputs. Aligning and conforming to a jointly agreed data standard, and sharing information in this standard on a shared platform, has potential to greatly increase the effectiveness and impact of the data developed by individual organizations.
  - c. Move from ad-hoc towards structured knowledge sharing and coordination: Interactions between donor organizations are numerous and frequent; however, they often lack a clear structure and consistency. Working groups dedicated to specific topics (such as the joint working group on climate finance across MDBs) offer opportunities to coordinate on areas identified as shared priorities, and maximise complementarity of activities and knowledge exchange for them. Similarly, a dedicated ‘coordination requirement’ within each project design / selection process, which enforces a structured review of cross-donor activities and outreach to donors working on related topics, could help to bring consistency and structure to interactions between different donors.

### Further reading

- › ADB, 2022: [Disaster-resilient infrastructure. Unlocking opportunities for Asia and the Pacific](#)



## Second contribution

**Author:** Anna Farina, Crisis Anticipation and Risk Finance Operations Lead

**Institutional affiliation:** Start Network

**Contact details:** anna.farina@startprogrammes.org

Assuming that a Climate Disaster and Risk Financing Insurance (CDRFI) system is strong when its financing instruments prioritise risks according to their importance, avoid overlaps with each other, strengthen each other and are well embedded in national policy frameworks and initiatives, we will explore how to effectively integrate Anticipatory Action (AA) into CDRFI strategies. This includes, for instance, a risk layering approach that is more anticipatory in nature.

What are opportunities to overcome siloed approaches and align different CDRFI & AA initiatives?

**a) How can we move donors from supporting instruments and programmes towards financing a more integrated 'strategy' at the country level?**

A recurrent issue in the humanitarian system is the habit of actors and donors to work or provide funds in silos focusing on a specific window of opportunity for intervention (disaster risk reduction, anticipation, response, recovery) and also on specific financial instruments which, used in isolation, can address only a small portion of the needs and may be much less effective than when used in concert with other instruments. Separating disaster risk financing, disaster risk reduction, early action (forecast-based financing, anticipation), preparedness, and humanitarian response into organisational silos and policy spheres is not effective. A continuum of action is needed, as are new ways to articulate this. A number of actions should be considered to drive donors toward a new way of providing funds:

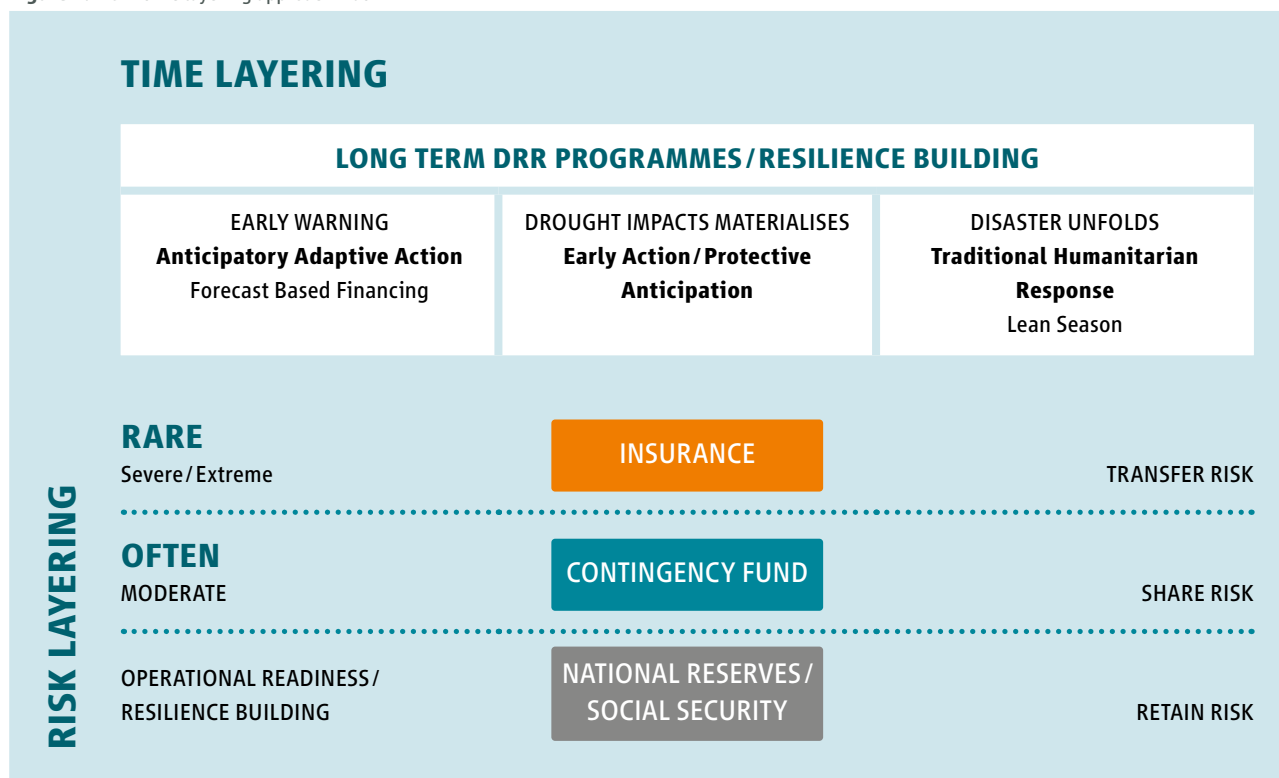
1. Humanitarian actors and practitioners have to start the design of the process with the analysis of the risk and the impact that the risk may have on people. DRF systems have to consider what people at risk need at different points in the disaster management cycle; costing the actions by humanitarian agencies (local, national and international) in a coordinated way to support that; drawing on that data to design the analytics to identify those risks and needs through a suite of hard and soft indicators. This then presents a humanitarian financing package from which the appropriate instruments can be identified, aligned and put in place<sup>49</sup>.

2. To move to a more holistic approach we need to ensure that disaster risk management is understood and programmed as a continuum. DRF is not different or separate from good disaster risk management and donors should be able to see the benefit of financing a system as a whole rather than a single product (such as a contingency fund for a specific risk or the purchase of an insurance premium).
3. In addition, it is also important to consider the relevance of a bottom-up approach from affected populations and local actors: a DRF strategy has to be locally-driven and locally-informed so that funds are used flexibly across the different layers in the most efficient way for the specific context, and not imposed by donors on specific instruments.

<sup>49</sup> IMPACT BEFORE INSTRUMENTS: [Thinking impact before instruments in humanitarian disaster risk financing](#)



Figure 2: Risk / time layering approach matrix



- It is important that donors realise that their funds can be used more effectively if used flexibly as part of one or more DRF systems. The graph below shows a risk/time layering approach matrix which considers the use of different instruments at different points in time and for different levels of disaster severity/frequency
- For DRF systems to ensure that all levels of risks and disaster severity are covered by efficient financing, different instruments and funds need to be coordinated and aligned, with clear financial remit. One instrument or fund cannot cover all risks at all severities across all windows. This means new instruments could potentially come into play but, at the same time, existing humanitarian funding lines could become much more strategic and directional in terms of their intended impact.<sup>50</sup>
- Allocating funds to specific instruments may be counter productive for donors as not only may they not reach the people in need, but they may also have to be returned to the donor at the end of the project after sitting unused for years. If a proper disaster risk finance system is in place, the profile of the risk may suggest that a specific event is more likely to happen quite often with a lower intensity, and therefore a contingency fund could be more appropriate than insurance. If funds are restricted for an insurance premium, the product may not ever trigger as the

- attachment point is set up too high to cover those medium size events happening in that context.
- At the same time, if funds are allocated flexibly, some can be used to trigger a Forecast Based Finance contingency fund implementing anticipatory actions, and some others can be allocated to purchase insurance that in case of pay-out would support the implementation of early actions just after the disaster had happened. Another part of the funds can be allocated to Disaster Risk Reduction activities aiming to improve resilience in the affected population to reduce the impact of the disaster and make the other interventions, in the medium/long term, less expensive and less needed. DRR and preparedness windows should be considered as an integral part of the SRF financing strategy even if funding streams are different to those provided for crisis windows, as investments in this type of programming is critical for increased impact in the following stages.

<sup>50</sup> IMPACT BEFORE INSTRUMENTS: Thinking impact before instruments in humanitarian disaster risk financing



**Guiding Question 2 b**

How can we ensure alignment and complementarity of different CDRFI instruments across the DRM continuum?



## First contribution

# How can we ensure alignment and complementarity of different CDRFI instruments (e.g. coordination or joint planning of /alignment of activities, pooling of resources, stakeholders and their roles / contributions) across the DRM continuum?

**Author:** Magdalena Mirwald, Jennifer Phillips, Soenke Kreft

**Institutional affiliation:** Munich Climate Insurance Initiative (MCII)

**Contact details:** M.Mirwald@ehs.unu.edu, kreft@ehs.unu.edu

## Considerations on the alignment and complementarity of Anticipatory Action and Disaster Risk Finance and Insurance

End of March 2022, the Munich Climate Insurance Initiative (MCII) and the Anticipation Hub convened German stakeholders from the humanitarian, climate and development community in a workshop to explore opportunities for closer collaboration to strengthen the disaster risk financing architecture<sup>51</sup>. At the moment, work is happening in silos, despite many common topics and challenges. Additionally, Anticipatory Action (AA) and Climate and Disaster Risk Finance and Insurance (CDRFI) can also be complimentary, since insurers and CDRFI providers ensure a quick payout, while humanitarian actors focus on impact. Thus, there is great potential for cooperation but there is still little incentive to actually collaborate.

### Shared analysis, collective outcomes – risk analysis as shared entry point

The potential for cooperation is immense since stakeholders of both CDRFI and AA conduct risk, hazard and vulnerability analyses, but there is little awareness of what already exists in the different sectoral silos. Shared analyses could be an entry point for collaboration, and should be led by and involve as many local stakeholders as possible. Joint challenges include, for instance, lack of data and difficulties to quantify damages. One suggestion was a joint in-depth feasibility study with stakeholder analysis at national level, which should capture the perspective of i.a. NGOs, CSOs and humanitarian actors, governments, as well as the private sector, and which should also explicitly address what is not working well so far (e.g. scale, reach, scattering, coordination).

### Support a comprehensive and inclusive risk management strategy

No single instrument can address all risks. However, national AA and DRF programs are often designed separately from one another. By jointly advocating to national governments to consider both approaches as complementary, stakeholders can encourage governments to integrate the appropriate solutions across their strategy and programs e.g. DRM plan, National Adaptation Plans, National DRF Strategy. Participants highlighted that such programming efforts must be driven by the country themselves and put people at the center: local actors and communities – including women and minority groups – should inform design of such programs from the very beginning to assure that the instruments are appropriate to make a difference at scale.

### Coordination and cooperation between donors and implementing agencies ...

Despite a multitude of actors and technical fora and first attempts to build cross-sectoral bridges, there is still a scarce understanding of who is doing what and where, not to speak of a lack of joint in-country workstreams despite similar objectives and challenges. Stakeholder analyses<sup>52</sup>, joint risk analyses and joint advocacy could be the starting points for shared AA-DRF programming at the country level. Existing structures should be finetuned, rather than creating new ones. It is important to find a strong network of partners at local, sub-regional, national or regional level (esp. If national actors are weak) to link AA and CDRFI. Regional risk pools can play an important role as vehicles, since they promote preparedness, support disaster risk reduction, and act as efficient and established delivery channels of insurance payouts. In more general terms, speaking a common language is important to overcome the sectoral divides.

51 MCII (2022)- Workshop Report: Anticipatory Humanitarian Action Meets Disaster Risk Finance

52 A mapping of key international stakeholders



A key recommendation was that donors should set stronger incentives for cooperation, e.g. by aligning and easing access to project financing across sectors and by demanding synergies at the program and project level. To support synergy building, donors could promote risk assessments and feasibility studies to inform in-country programs and projects and encourage cross-sectoral, multi-stakeholder partnerships, where appropriate.

#### **... with different mandates but common goals**

Climate impacts are a field of intersection for development and humanitarian actors that might allow for new corporations and financing modalities. Yet, more clarity is needed on both the division and connection of the various roles and responsibilities of NGOs/humanitarian agencies, government, and the private sector working on AA and CDRFI in a respective country. Mandates between development actors and humanitarians are different, and the humanitarian sector values humanitarian neutrality and independence. Private sector CDRFI providers offer instruments for individuals to protect themselves against climate risks to those who can afford to purchase them. For those who cannot afford such private sector products, government and humanitarian organizations need to step in. Hence, humanitarian support needs to be well targeted to those most in need in order save resources and not to harm the market for CDRFI instruments e.g. if potential customers people can depend on handouts.

Despite those differences that require awareness, the target group for both AA and many CDRFI solutions remain the poor and vulnerable populations. In order to facilitate cooperation, there should be shared underlying principles. Existing pro-poor principles, such as the Pro-Poor Principles of the InsuResilience Global Partnership<sup>53</sup> (1. Impact, 2. Quality, 3. Ownership, 4. Complementarity, 5. Equity) could serve as a common place of departure.

#### **Finance**

New money and instruments are necessary to accommodate the growing financing needs, since neither climate adaptation nor humanitarian needs are already not covered and AA funding should not reduce the existing budgets. The allocation of funds should prioritize the most vulnerable, and climate vulnerable and affected countries should be empowered and consulted during the decision-making process in how and where funds are directed, e.g. through the V20. Existing national mechanisms should be further strengthened and utilized to allow CDRFI instruments to reach scale. Generally, the financing space needs to be re-organized in a coherent and coherent way. This includes access to CDRFI funding and global funding facilities such as the Global Risk Financing Facility or Green Climate Fund to be eased, aligned and made accessible for a wider range of stakeholders across the AA and CDRFI communities.

53 InsuResilience (2019): [Pro-Poor Principles of the InsuResilience Global Partnership](#)



## Second contribution

**Author:** Anna Farina, Crisis Anticipation and Risk Finance Operations Lead

**Institutional affiliation:** Start Network

**Contact details:** [anna.farina@startprogrammes.org](mailto:anna.farina@startprogrammes.org)

1. It is clear that humanitarian interventions are in most cases still happening in silos having different actors and different donors focusing on different windows of opportunity: disaster risk financing, disaster risk reduction, early action (forecast-based financing, anticipation), preparedness and humanitarian response are kept separated from an operational point of view but also within the policy sphere. This approach is not effective and limits the impact of the different actions on individuals in need. A continuum of action is needed across the spectrum of climate risk management.
2. In order to avoid this approach, actors should focus first on identifying the needs present in a country and create a solid disaster risk strategy which analyses the main risks, the local vulnerabilities, and the impact that disasters have on the population. Once the needs are defined, it is important to choose the right instrument to cover them according to the frequency and severity of risks.
3. Vertical risk layering approach: to avoid overlapping of funds and resources it is important to consider that different instruments should be used at different risks' attachment points. Insurance instruments are more appropriate for big events that happen less frequently, while contingency funds should be disbursed more regularly for small-to-medium events that happen more frequently. If attachment points are properly chosen as part of a national plan, instruments will ensure complementarity and will not overlap with each other.
4. In Disaster Risk Management it is also important to consider the horizontal layering approach where different interventions can be planned through at different windows of opportunity, creating a continuum that provides support to people from the forecast stage to the aftermath of a disaster. In an ideal scenario, funds should be provided flexibly from donors into pooled funds that agencies can easily access and that can be discretionarily applied across the different stages, being able to coordinate interventions and leave no gaps.
5. The preparation of a DRF strategy at the national level involving Government, local authorities, communities, and agencies is a good starting point to facilitate coordination among actors and complementarities among instruments avoiding that some stages of the disaster end up underfunded while others receive too many resources. Having access to flexible funds that can be drawn according to relevant needs is, as explained before, crucial to make the interventions as effective as possible.
6. The preparation of coordinated contingency plans among all the actors is also important to ensure that there are no overlaps or waste of resources. Humanitarian and development actors should be able to complement social security programmes already in place by the Government with the use of CDRFI instruments surging capacities where needed. If the DRF strategy is drafted at the national level, agencies should be able to split among themselves the areas of interventions and define coordinated activities with the national and local governments.
7. Coordinated capacity surge in case of a crisis is also important to guarantee the most effective allocation of resources. Having access to flexible funding would allow agencies that already implement resilience or DRR programmes to scale up their intervention when needed, adding AA and eventually response activities, leveraging on their network and their resources.



## Third contribution

**Author:** Jonathan Gascoigne

**Institutional affiliation:** Centre for Disaster Protection

**Contact details:** jgascoigne@disasterprotection.org

NB: some of these points also relate to: 2 e) How can AA supported by CDRFI, and incorporated in risk analytics, reinforce longer term risk management and development planning at a national level?

- › As more actors enter the AA space, and more experienced actors develop a broader portfolio of potentially overlapping projects by geography, hazard and target recipients, there is a key need to be co-ordinated to ensure optimal deployment of resources and achievement of development goals.
  - › When CDRFI arrangements are already in place in a country, any new financing programme must take them into account and plan with and around them. If it
  - › doesn't beneficiaries could be double-targeted or delivery systems, such as cash transfer infrastructure, could be duplicated unnecessarily.
  - › CDRFI/AA work is often undertaken in data-scarce environments, where national agencies (e.g. meteo, hydro, disaster management) have limited capability (and better things to do) to handle a series of disconnected requests upon their time, services to support in-country schemes.
  - › Risk data and analytics costs can be prohibitively expensive, particularly for new entrants to AA with pilot projects. Thus, pooling of resources around technical aspects of trigger design or recipient targeting could be used as a key driver to encouraging alignment.
  - › Such co-ordination avoids 'reinventing the wheel' for organisations and hopefully accelerates the lessons learned cycle of innovation through collegiate approaches
- › The combination of operational contingency plans alongside CDRFI and pre-arranged financing (PAF) is a clear prerequisite for effective disaster response planning.<sup>54</sup> The benefits of clarity around risk ownership, faster response and cost-effectiveness need to be balanced against the challenges of inflexibility, where the ability to react to specific (and possibly unique) event characteristics may be limited.
- › A regional approach could help with alignment and complementarity of instruments, as well as benefit from economies of scale and potential risk diversification, e.g. drought index-insurance for pastoralists across the Intergovernmental Authority on Development (IGAD)<sup>55, 56</sup>
- › CDRFI instruments should be planned as the result of a systematic risk prioritisation process and build on and integrate with existing systems, ensuring that broader resilience is built.
  - › Strategic thinking should also ensure integration with long-term planning and policies. It typically takes a long time for CDRFI initiatives to develop their full potential. Including them in long-term planning and policies can support their durability and enable them to mature to a point where they are fully effective.
  - › CDRFI must clarify and amplify the role it can play relating to climate change adaptation (CCA). This refers to making climate finance more risk-sensitive (as mentioned above) as well as tackling challenges including enhancing risk reduction and balancing short-term insurance products with long-term adaptation measures.<sup>57</sup>
  - › 'These efforts to join the financing of risk reduction to insurance would have benefits at micro-, meso- and macro- levels in making insurance products more sustainable. In doing so, insurance can be part of the wider fiscal framework and physical planning necessary to support the virtuous circle of both bridging financially, and reducing physically the protection gap.'

<sup>54</sup> Lung, F. (2020) 'Being timely: creating good triggers and plans in disaster risk financing', guidance note, Centre for Disaster Protection, London.

<sup>55</sup> CENTRE FOR DISASTER PROTECTION: Climate impacts on the front line: lessons from the DIRISHA project for pre-prepared finance

<sup>56</sup> ILRI (2021): After 10 years in Kenya and Ethiopia, are we ready to scale up livestock insurance in the Horn of Africa?

<sup>57</sup> Jarzabkowski, P., K. Chalkias, D. Clarke, E. Iyahan, D. Stadtmueller & A. Zwick. 2019. "Insurance for climate adaptation: Opportunities and limitations." Rotterdam and Washington, DC.

- › CDRFI can touch on many policy areas beyond disaster risk management, such as climate change, agricultural development, economic development, and poverty alleviation. Policy plans for these areas should explicitly consider CDRFI instruments where they are relevant, to ensure full utilisation of their benefits.<sup>58</sup>
- › Barriers to alignment and complementarity are not all technical. Politically, national policymakers or donors may have different objectives, so what is strategic for one, may not be strategic for another. For example, some donors may wish to advance financial protection against climate-related disasters rather than for health or conflict-related disasters. Similarly, given the nature of election cycles, national policymakers may have an incentive to focus on frequently rather than rarely recurring events, although the impact of the latter may be much bigger. Meanwhile, donors may have an incentive to focus on the bigger, less frequent disasters that, if not well managed, may end up leading to large humanitarian appeals.
  - › Another political dimension relates to the role of international financial institutions. They often provide both the technical assistance on selecting the right financing instrument and subsequently offer the respective financing instrument itself, for example, a contingent line of credit or a sovereign insurance contract. Conflicts of interest may inevitably arise.
- › To remedy challenges of overlap, countries should ideally adopt **national DRF strategies** that indicate which disaster risks exist in a given country and how these risks are intended to be counteracted financially. As a minimum solution, policymakers and partners working on new DRF initiatives should be diligent in reaching out to all other initiatives working in the same risk context in a given country.
- › Regarding the DRM continuum, there are ways in which financial planners can ensure that disaster response financing instruments encourage prevention and preparedness rather than vice versa. (Poole et al, 2020, pg 40)<sup>59</sup> in *The Future of Crisis Financing* identify approaches that include:
  1. **Include conditions.** Publicly-financed response financing instruments can be structured so that they require prevention or preparedness measures to be implemented
  2. **Calibrate payment terms to promote prevention and preparedness.** Funders of contingent disaster responses have an interest in, and should be incentivised in lowering the risk of disasters.
  3. **Combine contingent financing for response with complementary prevention and preparedness measures.** This is what many national disaster funds around the world do already—providing both disaster response funding and supporting DRR and preparedness building. However, this can often be done in a more targeted fashion, specifically supporting activities that reinforce each other.
- › The October 2021 *InsuResilience* magazine<sup>60</sup> features an article by Iyehen and Clarke that enumerates critical design elements for achieving a crisis financing system that effectively harnesses insurance and associated risk management principles that includes:
  - › **Inclusive governance** – Aid is more efficient and effective when the right questions are asked and all the solutions are made available. This only happens when everyone has a seat around the table – and this is not the case at the moment. Funds for crisis response, including the provision of premium subsidy, must be set up with a full complement of expertise within the governance structure where local actors are engaged at every stage and the private sector is part of the process.
  - › **Inclusive eligibility** – Financing must be accessible in every context for a broad range of actors who are willing to deliver impact and be a positive force for change. Particularly at local level, giving a broader community of actors access to financing will contribute to driving more locally-owned solutions, offering the greatest hope of strengthening national response mechanisms.
  - › **Transparency** – Donors and governments must be prepared to be open about the projects they fund, including those financed through premium subsidies, and the impact of those projects. Right now, most decisions are made behind closed doors.

58 Lung, F. (2020) 'Aligning with the bigger picture: thinking strategically in disaster risk financing', guidance note, Centre for Disaster Protection, London.

59 CENTRE FOR DISASTER PROTECTION: THE FUTURE OF CRISIS FINANCING: A CALL TO ACTION

60 *InsuResilience* (2021): *InsuResilience Magazine*

**Guiding Question 2 d**

How can the risk reduction effects of AA be recognized in the design and pricing of CDRFI instruments?





## First contribution

# How can the risk reduction effects of AA be recognized in the design and pricing of CDRFI instruments?

**Author:** Jenty Kirsch-Wood

**Institutional affiliation:** United Nations Office for Disaster Risk Reduction (UNDRR)

**Contact details:** jenty.kirsch-wood@un.org

## Possible Solutions/Alternatives

Disasters occur when a hazard event impacts an exposed or vulnerable community that lacks the coping capacity to avoid or prevent its impacts. While AA cannot impact the hazard 'side' of the equation, AA interventions can be designed to reduce underlying hazard exposure and socio-economic vulnerability.

In terms of system design and pricing, greater investment is therefore required in understanding risk. Current tools often place a premium on understanding hazard data, and financial tools focus on understanding exposure (such as building strength or infrastructure age). Understanding of socio-economic vulner-

ability has traditionally been less of a focus. Strengthening this analytics capacity, drawing for example on sub-national data on socio-economic trends including gender and social exclusion criteria is essential. These analytics can help distinguish different end-user groups for CDRFI instruments; for example, distinguishing between users likely to be able to purchase affordable insurance products if they were available, and those groups more likely to only rely on post-disaster last-resort humanitarian relief. Understanding different vulnerable group is the core of the layered financial strategy. This better understanding of socio-economic vulnerability is also essential to the establishment of humanitarian action AA triggers that need to be more sensitive and targeted than pure hazard based parametric measures.





At the same time, well designed CDRFI products can create incentives for preventive risk reduction action. For example, offering lower mortgage rates for homes that adhere to disaster resilient zoning and building codes can both reduce risk and incentivize good practice. Similarly strengthening social safety nets, requiring population opt-out rather than opt-in to products like municipal flood insurance can better spread risk. This also can potentially free up government resources so that they can be targeted to those truly in need of life-saving humanitarian support.

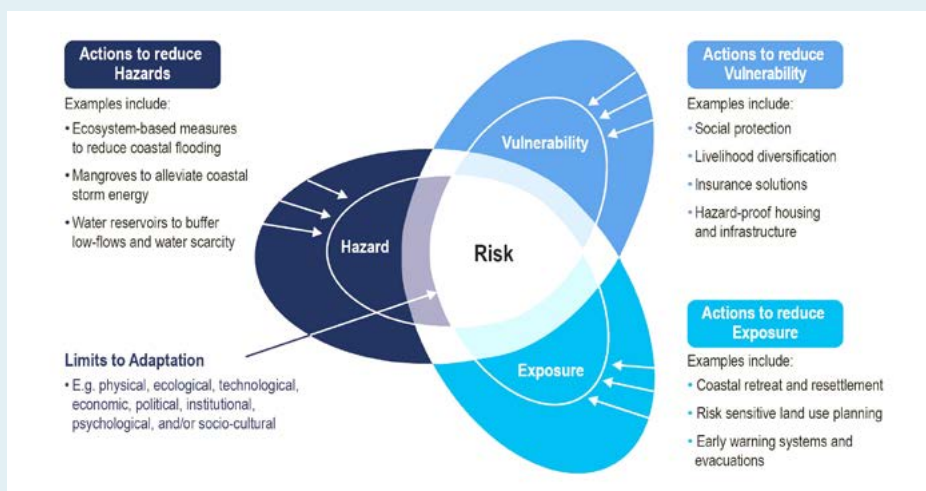
## Recommendations / Guidance

- › Invest in improved financial and systemic risk models that are better able to factor in socio-economic vulnerability as a key component of risk
- › Apply improved risk analytics to better differentiate user-groups to enable risk sharing and more target effective humanitarian assistance only for those who need it.
- › Use tools such as social-safety nets and financial incentives for risk reduction build resilience before disasters, reducing the need for post-disaster relief.
- › Work with humanitarian response and other actors to improve the socio-economic trigger understanding to be applied in product design.

## References / Further reading

- › GAR 2022
- › IDF Disaster Financing Paper
- › Preventionweb: [Understanding disaster risk](#)

## Further design elements to include/consider



- › IPCC (2019): [Special Report on the Ocean and Cryosphere in a Changing Climate](#)





## Second contribution

---

**Authors & Institutional Affiliations:** Swenja Surminski (London School of Economics), Daniel Stadtmüller (InsuResilience Secretariat)  
**Contact details:** s.surminski@lse.ac.uk, daniel.stadtmueller@insuresilience.org

---

It is widely understood that anticipatory action is an important element in the toolkit to reduce and cope with impacts of disaster and climate risks. Complementary to long-term risk reduction and risk financing, anticipatory action relates to preventative steps that can be taken in anticipation of forecasted events, including drought, flood, or tropical cyclone.

Anticipatory action has gained significant momentum within the humanitarian sector in recent years as risk analysis and early warning systems are becoming more accessible and more granular and the ability to forecast impacts of climate-related disasters increases. Globally pooled humanitarian funds such as the DREF and CERF have components that allow for anticipatory action to get funded based on risk analysis and forecast, coupled with pre-agreed plans. In addition, first pilots to integrate early warning systems and forecast-based indexes into risk financing solutions so as to enable payouts even before a disaster hits are increasingly emerging. These initiatives build on and draw from the wider work by the development and climate community to increase financial protection through innovative disaster risk financing tools.

Within the portfolio of projects implemented under the framework of the InsuResilience Global Partnership (IGP) there is a growing recognition of anticipatory action:

the Partnership's annual data collection among programmes specifically asks whether the instrument being implemented supports anticipatory action. Anticipatory Action in this context is defined as 'the use of forecasts or early warnings of imminent shock or stress to reduce or mitigate the impact of disasters and enhance post-disaster response. Anticipatory action includes forecast-based financing, forecast-based action, early warning early action and other approaches to provide critical support to at-risk communities before disasters occur.' **Of the current 300 CDRFI projects under IGP, 70 specifically support AA**, based on self-reported data of surveyed implementing partners.

Building on the piloting efforts of recent years, scaling up and mainstreaming anticipatory action as an integral component of a comprehensive DRM is considered to bear substantial resilience benefits for climate-vulnerable countries and poor and vulnerable people. Scaling up anticipatory action requires more funding to be prearranged on a forecast basis, so that more people can



receive assistance ahead of predictable shocks. It also means expanding the geographic coverage and types of shocks that can be forecasted reliably, as well as the ability and capacity of the system to respond collectively in a coordinated manner.

Through the joint work and exchange within this Sectoral Community on Anticipatory Action and Risk Financing, we have identified four key enabling factors:

- › **Collaboration and engagement at the country level:** A greater technical exchange and coordination between those who are developing CDRFI and those seeking anticipatory action interventions is needed. We notice gaps in understanding, including funders, policymakers in vulnerable countries and implementing partners. In-country collaboration and coordination between development partners working on CDRFI and humanitarian actors should be encoded within each CDRFI project. A key question is also the engagement of risk finance project managers and their motivation to consider AA in their projects. CDRFI implementers should consistently check for Forecast-based Finance and anticipatory trigger potential within their projects. The guiding question should be: is it better and technically possible to trigger pay-outs before a disaster, or are there good reasons to stick to a post-disaster trigger?
- › **Funding:** Harnessing the benefits of linking CDRFI to anticipatory action requires greater public and private investment. Catalysing an earlier, more effective disaster response requires integrated disaster risk financing systems that apply different financing tools and approaches. A risk layering approach can help funders allocate funds efficiently so as to integrate anticipatory action with other risk management tools and avoid duplicative investments.

- › **Harmonizing triggers for payment:** one important consideration is whether trigger systems can be harmonized so that funds are released and anticipatory action is implemented in a coordinated way according to aligned plans. This will require investments in data, forecast models, early warning systems, PPPs with the private sector to incentivize product development, etc.
- › **Evidence collection:** Project implementers need to consider early the type of data and evidence needed, and set up corresponding monitoring, evaluation and learning systems. IGP's Evidence Roadmap offers guidance and highlights the following key information gaps for AA:
  - › Does early or anticipatory action lead to cost savings and if this is the case, how can these be quantified?
  - › How to overcome disincentives and political economy factors that run against anticipatory action?
  - › What are the different objectives and interests of humanitarian, development and private-sector actors, and how can these requirements be met in joint initiatives?
  - › How to work with products that were initially developed on the basis of financial metrics rather than on humanitarian outcomes?

**Guiding Question 2 e**

**How can AA supported by CDRFI, and incorporated in risk analytics, reinforce longer term risk management and development planning at a national level?**



## First contribution

# How can AA supported by CDRFI, and incorporated in risk analytics, reinforce longer term risk management and development planning at a national level?

**Author:** Matthias Range, Imogen Outlaw

**Institutional affiliation:** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

**Contact details:** Matthias.Range@giz.de, Imogen.Outlaw@giz.de

## Merging Humanitarian and Development Perspectives through Anticipatory Action

**Anticipatory Action (AA)** is an approach which has been gaining profile and support within the humanitarian community. In more general terms, AA seeks to reduce human suffering, losses and damage by enabling relevant actors, especially affected communities, to act ahead of a potentially harmful event. AA typically links robust forecasts or credible risk analyses of when and where a hazard will occur to action plans and are ideally supported by a pre-arranged financing agreement. These action plans are prepared well in advance, list actions that are preventative or mitigating in objective and clarify who does what, when and how. Activities include, for instance, providing cash, sanitation and hygiene kits and shelter toolkits ahead of the shock and taking measures to safeguard livelihoods, such as the evacuation of livestock. These activities are set in motion when critical forecast thresholds or triggers are reached. AA is therefore an integral part of disaster risk reduction and has been utilized by the humanitarian sector as a tool to strengthen local communities and disaster preparedness.

There exists substantial overlaps between the core activities that characterize AA approaches and the development cooperation's overarching efforts to strengthen resilience to better withstand shocks (e.g. by combining and strengthening available financial instruments, joint investments in data and early warning systems, and early actions and contingency plans at the local level). Despite these apparent overlaps, discussions and policy developments have taken place in siloes. There has been little engagement between the humanitarian and development sector to link efforts and build upon each other's comparative advantage. This leads to a loss in synergies and potential. It is long overdue that the perspectives and approaches of humanitarian sector and the development cooperation (DC) exploit linkages to combine and align our instruments and the planning efforts of local stakeholders, before and after an external shock of a certain dimension strikes.

The question we pose is, how can anticipatory action supported by CDRFI, and incorporated in risk analytics, reinforce longer-term risk management and development planning?

An entry point to this discussion is to develop a broader understanding of Climate and Disaster Risk Finance and Insurance (CDRFI) that goes beyond the use of retention and transfer instruments (such as insurance) to discuss how private and public financial products and fiscal planning strategies can be utilized by stakeholders to enable and incentivize a comprehensive and integrated risk management approach (IDRM). Forecast-based Finance (FbF)<sup>61</sup>, an approach developed and applied among others by the German Red Cross, links finance to pre-agreed forecast triggers to provide automatic pay-outs to implement early action – similar to insurance but donor financed. Initiatives like FbF show the potential for synergies between the DC and AA, and in our understanding should be fostered (also towards the use of private funds) and considered in the development of respective CDRFI strategies (which we call risk finance strategies) at the sovereign level, and included in any toolbox on IDRM. Through combining DC and humanitarian perspectives and tools on disaster response, a more comprehensive global disaster risk finance architecture can be developed under the G7 initiative “Towards a Global Risk Shield” and the UNFCCC framework which would have beneficial implications for the implementation of national climate and risk management plans including EAPs, NAPs, and NDCs.

<sup>61</sup> Forecast-based Financing – worldwide disaster relief with forecast-based financing ([forecast-based-financing.org](http://forecast-based-financing.org))



## The Role of Anticipatory Action in Risk Management Planning

Early warning, forecasts and predictions are used to carry out instruments of the development cooperation (DC) but also humanitarian aid, helping to distribute aid before disasters strike and allowing for faster aid distribution in the aftermath. As with other intervention efforts, national development planning and risk financing strategies should be based on informed decision making grounded in scientific analyses and informed by community participation. Understanding the dimensions of risk, impact and action by different stakeholder groups is especially important for risk transfer solutions and AA, as time is critical, and costs explode in times of need. Risk assessments, including economic, social and ecological vulnerability-, demand-, and cost-benefit analyses, are tools whose data sources are constantly improving and applications are currently mainstreamed. Moreover, “Impact Based Forecasting” for anticipatory action, co-developed by National hydrometeorological services and humanitarian organizations in various countries, allows for a more target group oriented planning of interventions and actions. Collaboration between sectors to develop risk analytics and more targeted understandings of risk would ultimately benefit long-term risk management and improve the use of funds.

Similar to risk finance strategies and the implementation of IDRM across the stakeholders, AA encourages collaboration and cooperation amongst agencies and ministries (nationally and regionally). It also demands the development and simulations of participatory (national and local) contingency plans to determine the possible demand and potential synergies of different target groups, critical infrastructure, and relevant institutions. Through this ex-ante planning, AA defines the roles and responsibilities of actors which can increase ownership and the internalization of long-term risk management plans and response efforts. This holds vice-versa new potential to improve risk transfer solutions with adequate delivery structures to enable broad and wide-spread action. Important is the understanding that governments play a coordinating role but are not solely responsible for the definition of demand, nor the implementation of risk management efforts. To be comprehensive, effective, and efficient, all stakeholders from household level to the national government have to be included, take responsibility and should be enabled to become active.

The second part of the question – how to integrate AA into risk management and development planning – remains largely hypothetical as we have hardly seen this theory of change implemented. Most important for us is that AA coincides with similar initiatives by the development cooperation and should be considered

as an integral element of an IDRM approach to improve long-term financial planning of disaster management. CDRFI instruments that fall under risk reduction and preparedness activities have a fundamental impact on the design of AA and should vice versa be designed according the needs of AA to be most effective. The general idea of retention and risk transfer products can be adapted (see FbF) or be linked to AA efforts (see [ARC Replica Programme](#)). The integration of CDRFI elements into AA can also include the outreach to private or market-based financial sources or the use of fiscal instruments to incentivize or penalize certain behaviour (e.g., on an SME/meso level).

Through supporting ex-ante financing arrangements, more predictable and reliable disaster response can be leveraged, which allows stakeholders to plan logistic and financial responses. Moreover, through combining the efforts of the DC and humanitarian sectors, AA and CDRFI instruments can benefit from expanded distribution networks and reach last mile-customers that are outside of typical financial services channels. Collaboration can strengthen existing (public and private) delivery channels (e.g., social protection systems or cash transfer mechanisms) which is beneficial to both sectors. Overall, a recognition of the synergies between the AA and CDRFI can help to develop more robust infrastructure for disaster response and risk management.

In the long-term, AA substantially mitigates risks, decreases the costs of reactive efforts, and allows for more efficient use of humanitarian and disaster response funds. The development of joint action is of urgency as we face the need for 41 billion US\$ in 2022, with 274 million people (an increase by 30 Mio of the all-time high last year) in need of humanitarian assistance and protection<sup>62</sup>. We have to dis- and re-assemble our instruments, identifying overlaps, enabling factors, and synergies. We need to align our usage of funds between sectors to efficiently and effectively respond to protect people at risk.

### Further Reading

- › [Disaster Risk Finance Toolkit](#)
- › [www.anticipation-hub.org](http://www.anticipation-hub.org)

<sup>62</sup> Global Humanitarian Overview 2022 | Global Humanitarian Overview ([unocha.org](http://unocha.org))



## Second contribution

**Author:** Sophie Javers, Tara Chiu

**Institutional affiliation:** The Feed the Future Innovation Lab for Markets, Risk and Resilience at the University of California Davis

**Contact details:** sejavers@ucdavis.edu , tlchiu@ucdavis.edu

### Protecting the Vulnerable to Support & Reinforce Sustainable, Inclusive Development Planning

There is growing agreement in the development community that anticipatory risk action is a key pillar of development budgets – that waiting until after a disaster strikes to provide funding or social supports, while unavoidable, is costly both in terms of human and financial capital. But what is not yet agreed upon is what combination of integrated approaches will best contribute to the objective of reducing poverty in a way that is both sustainable and cost-effective.

### Quality Risk Management Tools For Sustainable, Inclusive Development

Evidence to date indicates that the inclusion of quality climate and disaster risk insurance for smallholder farmers and pastoralists within long-term government level social protection and disaster risk mitigation schemes is an essential element of national planning. This evidence indicates that the presence of anticipatory action (such as insurance) lowers the total cost of social protection relative to the traditional approach of issuing cash transfers and other emergency assistance reactively after a shock occurs.

What makes the inclusion of insurance so potentially important in national level anticipatory disaster risk planning is efficient targeting of those vulnerable populations hovering at or just above the poverty line, not just the poor. This thinking is a bit of a paradox, setting aside scarce funding to foster insurance schemes and even subsidize some portion of insurance premiums to support those who are not actually the poorest. But it works. The development community has long observed that pursuing overall reductions in poverty rates requires not only lifting people up out of poverty, but also by preventing descents into poverty for low-income, vulnerable non-poor populations. By incorporating these borderline, vulnerable populations, insurance can be used to cost-effectively implement a type of contingent disaster risk protection that breaks the descent of the vulnerable into poverty, creating a vulnerability reduction effect. This more proactive approach that includes insurance for the not-yet-poor saves public funds by in the long-run by devoting resources to the creation and subsidization of risk transfer markets that can halt shock-driven descents into poverty.





## Insurance and the “Resilience+” Potential for National Development Planning

Further, insurance can not only help keep people from falling down the ladder into poverty after a shock, but it can also provide protection that encourages people to take beneficial risks to improve their financial circumstances. The confidence that the insured feel enhances investment incentives for both poor and vulnerable households, creating an investment incentive effect that can set households on new, higher growth trajectories. In this way, insurance can provide more than resilience alone.

This investment incentive effect, or “Resilience+” effect should not be underestimated as a driver of economic growth. With insurance, families invest in improved agricultural inputs like drought tolerant maize that increase yields, or better medicines for livestock that bolster asset retention. One example is the Kenya Livestock Insurance Program which is part of an extensive drought-management and social protection program coordinated by the Kenyan government. Pastoralists with insurance are more immediately able to withstand a drought shock because the insurance trigger is tied to anticipate drought conditions and pays out in advance of livestock mortality. The knowledge of that protection spurs their investment in life-saving medicines or emergency forage for their livestock, but also reduces the need costly coping mechanisms that the family might endure like shedding assets or meal skipping which can lead to malnutrition and the intergen-

erational transfer of poverty. Social protection programming that families know will reliably and predictably protect them against disasters might induce investments that generate Resilience+ and reinforce the national development efforts as a whole.

Field research paired with complex theoretical modeling has shown that over time, the inclusion of an insurance market as part of a national level social protection program (including one that pays out some portion of premium subsidies) will ultimately save governments money. With verified high-quality insurance design, this approach can anticipate or speed up the delivery of risk protections for both vulnerable and poor populations. The protection offered by quality anticipatory action thus can reinforce broader development planning both by protecting against costly backsliding and supporting inclusive economic growth.

### Further reading

- › [Can insurance alter poverty dynamics and reduce the cost of social protection in developing countries?](#)
- › [Evidence Insight: Generating Resilience+ to Reduce Poverty and Spur Agricultural Growth](#)



**InsuResilience Secretariat**

Friedrich-Ebert-Allee 32-36  
53113 Bonn, Germany  
secretariat@insuresilience.org  
www.insuresilience.org

**Published by**

Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

**Registered offices**

Bonn and Eschborn, Germany

As of February 2023

**Editors**

Anticipation Hub, InsuResilience Secretariat, REAP Secretariat

**Design and layout**

kipconcept gmbh, Bonn

**Photo credits**

AdobeStockphoto.com: bah69 (p. 60), Who is Danny (p. 9), Marco Gallo (p. 31), ilik kasnadi/EyeEm (p. 13), michaelheim (p. 59), miloantares (p. 15), Nropb Epemeeb (p. 51), Riccardo Niels Mayer (p. 37), poco\_bw (p. 57), Rawpixel (p. 21), Sergii Figurnyi (p. 55), Tanawit (p. 34), Thannaree (p. 41), tranquocphongvn (p. 11), xuanhuongho (p. 56)  
GIZ: Sabrina Asche (p. 30), Martin Godau (p. 28), Ranak Martin (p. 12, 49), Guenay UlutunÁok (p. 24)  
iStockphoto.com: borgogniels (p. 18), Jonathan Erasmus (p. 10)  
pixelfusion3d (p. 23), SolStock (p. 52)  
Shutterstock.com: Yaroslav Astakhov (p. 16), Ikechi Ugwoeje (p. 33), CRS PHOTO (p. 44)  
www.pexels.com: Jose Aragones (p. 46), Pavel Danilyuk (p. 42), Taryn Elliott (p. 1), tom fisk (p. 58), Erik Mclean (p. 43), mamunurpics (p. 63), Quang Nguyen Vinh (p. 26, 38, 47), Mikhail Nilov (p. 14), pixabay (p. 8), pok-rie (p. 4), Omotayo Tajudeen (p. 64)