

## SDC Disaster Risk Reduction Network



### Early Warning – Early Action: Shifting from emergency response to anticipatory action

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#### Editorial

‘Spending USD 800 million on Early Warning Systems in developing countries would avoid losses of USD 3–16 billion per year’, the Global Commission on Adaptation says in its global call for leadership on climate resilience (2019). Early warning - and anticipatory action triggered by it - aims at avoiding the loss of lives and livelihoods from geophysical or weather and climate-related disasters.



Sergio Pérez León  
Jacqueline Schmid  
Roger Schmid

Anticipatory action approaches are gaining increasing traction with donors, humanitarian agencies, and risk managers, for providing critical support to communities before hazards turn into disasters. Yet, despite the mounting needs, not least due to impacts of climate change, one in three people are still not adequately covered by early warning systems, and early and anticipatory approaches are not implemented at the scale required.

The Sendai Framework for Disaster Risk Reduction (DRR) targets to 'substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030'. Against this backdrop, 'Early Warning – Early Action' ranked among the top four priority topics in our [2020 survey](#) when querying the member's vision for the SDC DRR Network.

Early action - such as transporting vulnerable people to shelters, protecting assets and livelihoods by early cash transfers, early harvesting, or reinforcing housing or classrooms - happens between an early warning trigger and the actual disaster. Hence, effective anticipatory action requires determined (i) forecasts, triggers and decision-making, (ii) timed and planned early actions, (iii) financing mechanisms, and (iv) delivery channels.

The present newsletter features initiatives from the multilateral humanitarian system supported by SDC, and stories from the field of our Network Members, revealing how the shift from the 'Response' attitude to the 'Early Action' can be promoted, showcasing good practices, and informing on platforms or partnerships for joint innovation within the development and humanitarian systems.

Many thanks to all contributors for their time and efforts, supporting this extremely diverse harvest. With this rich 'inventory' we propose to start a joint learning journey on Anticipatory Humanitarian Action; we will be back to you on this.

Now, please enjoy reading and exploring the knowledge resources referred to in this newsletter.

[Sergio Pérez León](#), Program Officer for DRR Strategic Partnerships, SDC Head office

[Jacqueline Schmid](#), Senior Sector Policy Advisor DRR, SDC DRR Network, SDC Head office

[Roger Schmid](#), Newsletter Editor, Backstopping Mandate SDC DRR Network

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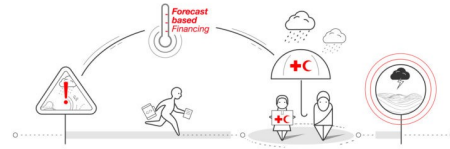
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**[Trends and initiatives in anticipatory humanitarian action](#)**

## IFRC: Technical expertise for scaling up anticipatory action - a collaborative endeavour

Scientific progress of recent decades makes it possible to predict with increasing precision the impact of climate and weather-related hazards such as hurricanes, drought, or flood. Based on risk analysis and forecast, pre-agreed action can be triggered with a



**forecast-based financing** – e.g. cash transfer, livestock protection or shelter strengthening. National Red Cross and Red Crescent Societies strengthen the forecast-based financing with technical expertise of the National Hydrometeorological Services. A growing body of evidence shows that anticipatory action works, and several global initiatives are set up to reach scale.

*See the full article [here](#).*

*Kara Siahaan, Coordinator Early Action and Disaster Risk Financing, IFRC*

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## CREWS: Early warnings for the most exposed people to climate risk

Seventy percent of the total deaths in Least Developed Countries (LDCs) of the past 30 years – 1.4 Mio people - lost their lives due to weather, climate and weather-



related hazards. The accepted explanation for the unacceptable fact is that access to early warnings, and preparedness levels, are insufficient. The **Climate Risk and Early Warning Systems (CREWS)** initiative has been established in 2015 to enhance international cooperation and increase availability and access to early warning systems for early action in LDCs and Small Island Developing States.

*See the full article [here](#).*

*Tamara Comment and John Harding, WMO*

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## ARC: Strengthening the resilience of African vulnerable populations against natural and health disasters

The impact of climate change is hitting Africa hard, resulting in increasing numbers of food insecure populations who have lost their livelihoods in areas affected by adverse weather events. The **African Risk Capacity (ARC)**'s goal is to provide timely and targeted ex-ante response mechanisms, with risk modelling based on weather data combined with household vulnerability. The early stepping up of safety nets reportedly prevents the losses of assets in lean periods.



**See the full article [here](#).**

*Hans Ramm, Senior Policy Adviser on responsible agricultural finance, SDC GPFS*

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## **WFP: Evidence base of anticipatory action and climate risk financing**

Prevent, mitigate and prepare for disasters is an essential part of the approach to combat hunger. Initiatives that explicitly link forecasts to trigger funding for pre-determined action ahead of a shock are relatively new in the humanitarian sector; the WFP, jointly with ODI, provides a body of **evidence pointing towards the positive impact of anticipatory**



**action**, and propose to strengthen the models for more powerful forecast-based early action based on disaster risk financing tools.

**More [here](#) on WFP anticipatory action and climate risk financing.**

*Based on inputs from [Charles Apotheker](#), Programme Officer, SDC Head office*

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## **OCHA: Financing with Country Based Pooled Funds**

## (CBPFs) / Central Emergency Response Fund (CERF)

CBPFs allow donors to **pool contributions in single, unearmarked funds** to support local humanitarian efforts for timely, coordinated and principled country-based assistance at reduced transaction costs. Switzerland has steadily increased its engagement with CBPFs over the years financially (up to \$28 million in 2020)



and strategically. Complementarily, the **CERF pools donor funds for a global reach**, permitting the UN to scale up a humanitarian response anywhere and anytime a crisis hits. Switzerland, as a long-standing donor, advocates for CBPFs to build on the CERF's experience in anticipatory action.

See [here](#) the most recent SDC factsheet on CBPFs and CERF.

Based on inputs from [Simone Droz](#), Programme Officer, SDC Head office

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## Weather4UN: Using weather and climate information to anticipate possible impacts of upcoming hydrometeorological events

Access to weather and climate information is crucial for the humanitarian community to trigger early action and reduce impacts of meteorological events. To facilitate access to such information, the WMO Coordination Mechanism (WCM) was created. Switzerland supports the WCM with the «Weather4UN» project implemented by MeteoSwiss and the SDC HA. Weather4UN is a **limited-in-time feasibility study developing showcases**. The goal of the 1st showcase is to develop global scanning capability to support the WMO Secretariat in providing regular advice to humanitarian agencies. In a 2nd showcase, the IFRC, ETHZ and MeteoSwiss will join forces to estimate the socio-economic impacts of forecast hazard events and to inform and enhance early action at the national level.



**More to come soon [here](#).**

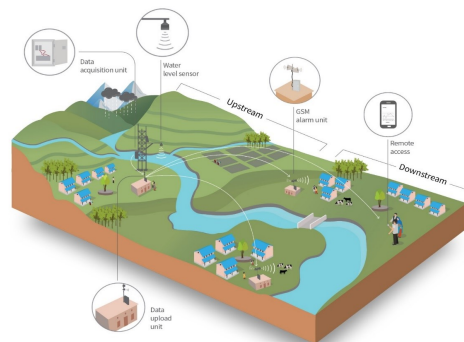
[Isabelle Bey](#) (MeteoSwiss) and [Justin Ginnetti](#) (IFRC)

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**Early warning – early action stories from the field**

## Climate resilience through disaster preparedness and early action in the Hindu Kush Himalayas

Throughout the Hindu Kush Countries, ICIMOD supports since 2010 the development of **Community Based Flood Early Warning Systems (CBFEWS)**, combining flood warning with preparedness planning, and community involvement. Their concept has been proven in several hazardous events such as floods and flash floods in small rivers and tributaries, and in 2014, the UNFCCC acknowledged by award the 'Effectiveness of CBFWEWS'. Since, the approach has been scaled out to Malawi and triggered private sector partnerships.



**See the full article [here](#).**

*Neera Shrestha Pradhan, Senior Water and Adaptation Specialist, ICIMOD*

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## Strengthen the community resilience to hydrometeorological risks in the Andes

The brand new **Early Warning Early Action (EWEA) - Andes** sets out to build institutional capacity on EWEA of municipal and national governmental actors in Peru, Bolivia and Ecuador. The project aims to strengthen anticipatory action through low-cost early warning systems at community level, and trigger forecast-based financing.



The initiative aims to bridge the gap to the national actors, by leveraging innovative efforts of the [Zurich Flood Resilience Alliance](#) and the [Red Cross Climate Centre](#) in the region.

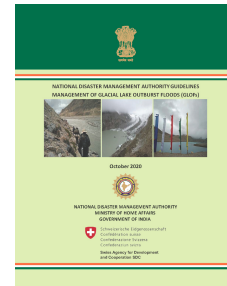
**See the [EWEA-Andes factsheet here](#) for further information and resources.**

*Omar Bellprat, DRR and Climate Change Specialist, SDC Head office  
Carlos Muñoz, Regional Advisor on DRR & Rapid Response, SDC Lima  
Benjamin Fischer, Programme Officer DRR, SDC Lima.*

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## GLOF Risk Assessment and Early Warning System in the Indian Himalayan Region

SDC's Global Programme Climate Change & Environment is partnering with the Government of India to strengthen technical and institutional capacities for current and future DRR from **Glacial Lake Outburst Floods (GLOF)**. The activities include the development of a comprehensive strategy for GLOF risk management, the siphoning of water from a glacial lake, community based disaster response planning as well as the development of a GLOF early warning system.



See [here](#) for further details.

*Divya Kashyap (Senior Thematic Advisor) / Mustafa Ali Khan (Project Team Leader), SDC New Delhi*

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## How the Red Cross links (sub)national early warning systems to communities at risk

The Red Cross supports local and national authorities to address gaps in linking local structures to higher-level disaster management systems, **ensuring that EWS spread alerts downwards to all exposed and vulnerable community members and upwards to link with the higher-level system.** In case of a lack of functional national and/or sub-national EWS, it supports communities to drive their own EWS. The setting up of community-based EWS requires a differentiated approach, depending on the country and community context.



See [here](#) Red Cross experiences from Nepal, Haiti, Ghana and Bangladesh.

*Anton Jöhr, DRR Advisor, Swiss Red Cross*

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## Building resilience to climate change in the Western African Volta Basin with trans-boundary early warning and flood and drought management

The International Union for Conservation of Nature (IUCN) **Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin (VFDM) project**

aims to implement the first large-scale and transboundary application of integrated flood and drought management strategies, including a complete end-to-end early warning system and participatory nature-based solutions. It empowers the National Meteorological and Hydrological Services and other competent authorities of the riparian countries with robust and innovative solutions for DRR and climate change adaptation.



*The VFDM is further described [here](#).*

*Verónica Ruiz, NbS Programme Officer, IUCN*

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## Intervención oportuna de Cruz Roja Nicaragüense a familias afectadas por los Huracanes ETA e IOTA

Nicaragua estuvo expuesta a dos **eventos ciclónicos de grandes magnitudes** con una diferencia de 14 días entre ambos. El Huracán ETA que impactó en la Costa Caribe Norte Nicaragüense con categoría 4 el día 3 de noviembre y IOTA de categoría 5 impactando el 16 de noviembre, dejando daños incalculables en la región. La



intervención de Cruz Roja Nicaragüense - [ver aquí](#) - ha sido integral, su plan de respuesta y recuperación, han tenido como principal eje de acciones el tema de Agua, Saneamiento y Promoción de la Higiene, Apoyo Psicosocial, Ayuda Alimentaria y Medios de Vidas; así como la preparación de las comunidades para la Reducción de los riesgos, contribuyendo de esta manera en la resiliencia comunitaria en los Municipios de Prinzapolka, Waspam y Bilwi.



## **Early Warning System to Promote Peace through improved Water Governance in Kenya**

Kenya has serious concerns over water scarcity leading to seasonal drying-up of the Ewaso Ng'iro river system leading to increased competition and conflict among and between different user groups. An early warning system has been piloted, helping communities to monitor the water levels in their respective rivers. Critical levels of water abstraction have been negotiated through a participatory approach with the Water Resource User Associations. Based on a hydro-met monitoring system water users get informed by SMS if they are allowed to abstract river water to ensure continuous availability of water within all river segments. CETRAD is piloting the system in 7 river catchments on the North Western side of Mt. Kenya Region. Trainings involve enhancing users' understanding of the various river flow threshold values and their capacity to manage and maintain the monitoring system.



**See the related poster [here](#).**

*Boniface Kiteme, Director of CETRAD*

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## **Practical Action's experience of building community based flood early warning systems**

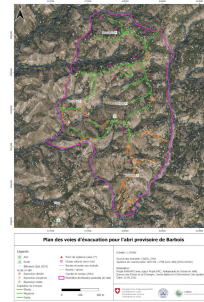
Practical Action gathers a wealth of experience working with communities to implement flood early warning systems (EWS) that are people centred, context appropriate, and actionable. Find here the [Top tips for building effective EWS](#) in a blog providing an [Overview of the work we have been doing over the past two decades](#) and examples of context specific solutions developed in [Nepal](#) and [Peru](#). We have also developed a checklist for ensuring that EWS are gender sensitive, responsive, and transformative: see [Gender Transformative Early Warning Systems](#).

*Anna Sevansson, Knowledge and Communications Officer, Practical Action*

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# Abris et plans d'évacuation pour les populations à risque en Haïti

Le **Projet d'Appui à la Reconstruction d'Habitat avec formation dans le Sud (PARHAFS)** apporte son soutien technique et financier à la Direction départementale de la Protection Civile afin qu'elle soit en mesure de fournir aux populations vulnérables de la côte Sud d'Haïti des solutions d'abris collectifs, leur permettant d'avoir une certaine réactivité vis-à-vis d'évènements adverses. Il appuie l'établissement d'un plan d'évacuation destiné à être diffusé dans les communautés. Un récent **rapport d'étude** oriente sur la méthodologie d'appui aux communautés dans l'élaboration de tels plans d'alertes.



*Samuel Derice, Officier de projet communautaire PARHAFS, Ambassade de Suisse en Haïti*

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## EWS 1294: A life-saving tool

Through subscribing to EWS 1294, communities in Cambodia can increase their disaster resilience, by receiving early warning information on natural hazards. The system also provides a platform for strengthened data collection of river and groundwater levels to enhance government policy development and interventions to support vulnerable populations in Cambodia.



***More on the Disaster Resilience and Water Management (DRAW) Project in Cambodia can be found in the full article and the leaflet.***

*Nhim Tith (Senior Project Officer, ActionAid Cambodia) and Jak Chowdhary (EWS1294 Project Manager, People in Need)*

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**Topic related platforms and knowledge base**

**Selected partnerships, hubs and coalitions boosting**

## anticipatory action

To address more risks, be applicable in more contexts and strengthen overall disaster risk financing approaches, experts and practitioners are engaging to enable anticipatory action to be applied where and when it is needed using adapted tools, innovative solutions and new ways of working. Various initiatives actively pursue this vision of expanding and boosting anticipatory action.

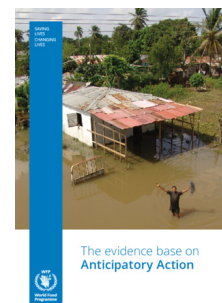


[See them here](#)

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## The Evidence Base on Anticipatory Action (WFP, 2020) – A review

Initiatives that explicitly link forecasts to predetermined actions and financing are relatively new in the humanitarian sector, so the evidence base is thin but growing. The review concludes that to achieve an effective scale up of the approach and ensure anticipatory action achieves the intended changes on both disaster response systems and people's vulnerability and resilience to climate change, robust empirical data and a strong monitoring, evaluation and learning agenda are necessary.

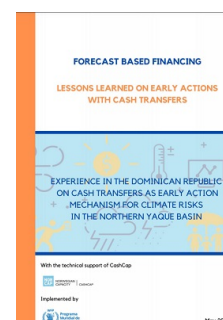


[See here](#)

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## Forecast based financing – lessons learned on early actions with cash transfers / FbF – Aprendizajes sobre las acciones anticipadas con transferencias monetarias en República Dominicana (WFP, 2021)

The publication presents the lessons learned related to the implementation of early actions with cash transfers as part of the forecast-based financing mechanism implemented by the World Food Programme (WFP) in the Yaque del Norte watershed in the Dominican Republic.



[See here](#)

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## Anticipatory crisis financing and action: concepts, initiatives and evidence (ODI, 2019)

This paper, commissioned by the Centre for Disaster Protection, outlines the current state of anticipatory action and discusses some of the existing evidence on its impact. It presents some examples of different types of impact associated with a range of anticipatory action in developing countries. The paper also highlights evidence gaps and points out some of the methodological challenges in measuring impact.



See [here](#)

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### Further news and resources

## Who is who: Kritsana Kityuttachai at the SDC DRR and Rapid Response Hub in Bangkok

Kritsana Kityuttachai has been recently appointed to the position of Specialist on Climate Change Adaptation and GIS at the SDC DRR and Rapid-Response Hub in Thailand. Her core expertise is in GIS and remote sensing applications in natural resources assessment, integrated spatial planning, climate change adaptation and sustainable land management.



Kritsana  
Kityuttachai

See [Kritsana's welcome address](#).

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## 2020 DRR Network survey results

In December 2020, the DRR Network has launched a comprehensive survey to better serve the needs and interests of its members. 71 respondents representing 22% of the Network membership have communicated their views on topics, services, tools and products the Network should focus on in the future. They have also shared an impressive amount of ideas on how they wish to contribute. The members' inputs were key to plan the Network's activities for 2021.

See the survey results [here](#).

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## **The role of DRR in the humanitarian-development nexus – outcomes from the annual workshop of the Swiss NGO DRR Platform**

How can DRR act as an entry point in different risk contexts, and which challenges prevail? This was discussed among practitioners during the annual workshop 2021 of the Swiss NGO DRR Platform. The event concluded among others that, while anticipatory humanitarian action shows promising results, there is still a long way to make it business as usual. [Upcoming webinars](#) will be on 'How to enhance conflict sensitivity in DRR' as well as on 'Operationalising the nexus in different contexts'.

See [here](#)

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## **Geneva Technical Hub - a joint initiative of SDC Humanitarian Aid and UNHCR**

June 11, 2021, Manuel Bessler, Deputy Director General of SDC, and Raouf Mazou, UNHCR's Assistant High Commissioner for Operations, officially launched the Geneva Technical Hub (GTH). The Hub aims to improve the lives of Persons of Concern to UNHCR by enhancing the quality of technical programming in DRR, energy, environment, shelter, settlement planning, water, sanitation and hygiene.

See [here](#)

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## **Climate and Environment Charter for Humanitarian Organizations now opened for signature**

The Charter is now opened for signature by all humanitarian organizations, following its adoption by the ICRC/IFRC: it intends to galvanize and steer collective action in response to the dramatic impacts of the climate and environmental crises, in particular for those who will feel their impacts the most. It includes seven high-level commitments to guide the sector's response to the climate and environmental crises as being humanitarian crises: they affect all of us, but they do not affect all of us equally.

[See here](#)

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## **Nature-based solutions for resilience and disaster risk management**

The [Words into Action: Nature-based solutions for disaster risk reduction \(UN DRR, 2021\)](#) aims to give practical, how-to-do information on setting up and implementing nature-based solutions, especially for DRR, but also for climate change adaptation. Further, the [GFDRR Digest – May 2021](#) offers an overview of nature-based solutions in World Bank efforts worldwide. The topic has rapidly become a focus of World Bank engagement, increasing its nature-based solutions related portfolio by 20% since 2018.

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## **Building Agricultural Resilience to Natural Hazard-induced Disasters (OECD/FAO, 2021)**

Drawing from country case studies in Chile, Italy, Japan, Namibia, New Zealand, Turkey and the US, the report proposes a new approach to building agricultural resilience to Natural Hazard-induced Disasters. It offers insights on how countries at all stages of development can build such agricultural resilience and enable the sector to continue to play its critical role in contributing sustainable development.

[See here](#)

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## **Hazard Definition and Classification Review - Technical Report (UNDRR, 2020)**

Which hazard? Understanding disaster risk is the goal of priority 1 of the Sendai Framework for Disaster Risk Reduction. In an increasingly complex, interconnected and systemic risk landscape, the broad range and complex nature calls for a standardized characterization of hazards – supporting nations in defining their disaster risk and strengthen risk reduction policies. The report provides therefore a common set of hazard definitions for monitoring and reviewing implementation.

[See here](#)

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