

# The Evidence-Based Anticipatory Actions And Lessons For The Future In Nepal.

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**Abstract:** Frequent and intense extreme weather events cause significant damage and losses to people every year in Nepal. Unmanaged cities, climate-induced risks, environmental degradation, and haphazard urbanization are the key factors that intensify disaster risks and threats to the people's lives and livelihoods who are living in high-risk areas. Anticipating the resilience of people, it is important to identify and reduce those risks and threats. Similarly, it is obliged to be well prepared through implementing preparedness measures and anticipatory actions based on the weather forecast and scientific triggers with appropriate strategies that can help to mitigate the impact of disasters. Climate shocks are being increasingly severe damage and increasing humanitarian needs. Present practices in Nepal show that except for a few cases, humanitarian action has been mostly responsive rather than preventive, arriving after a crisis has materialized. With recent advances in forecasting, humanitarian and development organizations have been able to anticipate and respond ahead of crises. This paper discusses and reviews the principles, and evidence on anticipatory action taken emerging from forecast-based financing-shock responsive social protection (FbA-SRSP), early warning early actions, and capacity building initiatives by Nepal Red Cross Society, UN OCHA, and WFP to the date in Nepal. Based on the evidence and learnings, explores the recommendations and lessons for the future to promote anticipatory action on the way to reduce losses on the lives and livelihoods of people in Nepal.

**Keywords:** Anticipatory action, Disaster risk reduction, Forecast-based financing, Humanitarian actions, Threshold, Triggers.

## 1. Introduction

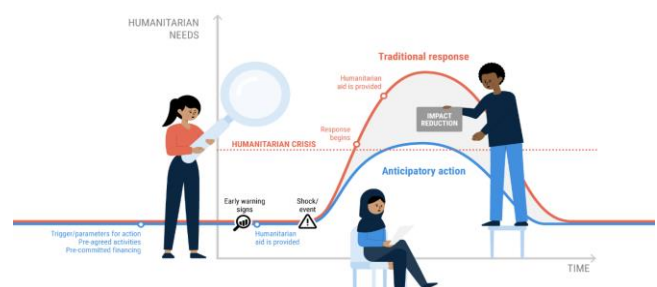
Anticipatory action is a set of humanitarian interventions triggered once a pre-agreed forecast threshold is crossed. This has to be possible by pre-agreed finance. Anticipatory action prevents or mitigates anticipated disaster impacts before a shock, or before desperate impacts are stroked. Anticipatory action, therefore, requires proactive measures to get ahead of major shocks to mitigate their potential impacts on vulnerable populations. There is no single claim on what constitutes evidence-based on anticipatory action, or even what calculations as evidence for or against anticipatory action. This partly reflects differences in opinion of what constitutes anticipatory action, as opposed to strengthening early warning systems or preparedness work more broadly for effective disaster risk reduction and management. Appropriate initiatives that come under anticipatory action include forecast-based financing, early warning early action, forecast-based action, and forecast-based early action (de Wit 2019). Forecast-based early action (FbA) is an approach that involves a series of disasters to a catastrophic event (IFRC, 2008a; WMO, 2015; Met Office, 2018).

Anticipatory action seeks to ensure before the peak impact of a shock takes place, reducing suffering and humanitarian needs. Anticipatory actions need to be conceptualized, discussed, and agreed upon in advance so that decision-making and financing can happen quickly and efficiently (Wilkinson et al., 2018). Most practitioners share a common vision of the importance of anticipation, but inventiveness classified as 'anticipatory', 'early', or 'forecast-based' are diverse, with different approaches to the timing of decisions and actions, the use of forecasts and risk information and the financing instruments and delivery mechanisms deployed (Wilkinson et al., 2018). This multiplicity is also reflected in the terms used to refer to anticipatory action (de Wit, 2019), as well as in the type of evidence that is being generated to understand impacts and build a case for further investment in these mechanisms. Though early action automatically makes

sense and there is a moral imperative to act if a catastrophe is predicted, to avoid human suffering robust, scientific evidence regarding the efficiency and effectiveness of anticipatory action is also needed to refine and improve these mechanisms.

Anticipatory actions intend to mitigate the peak impact of the shock. Consequently, those actions are implemented only if there is a high likelihood of such a shock happening and peaking, and if the implementation is extremely time critical. Anticipatory action agrees with humanitarians and affected communities to make informed decisions earlier in a humanitarian crisis saving time and money, saving lives, preventing displacement, disease, and loss of livelihood, and stabilizing the dignity of the affected people. Following the above discussion, anticipatory action is different from traditional humanitarian response and development programming.

**Figure 1:** Traditional response and anticipatory action to reduce the impact of natural disaster.



Source: UN OCHA

The above figure demonstrates that, in the traditional response mechanism (Red colored), humanitarian aid is provided after the humanitarian crises, where it takes a long time for the impact reduction, the casualty will be high, and

the response starts after the shocks or disaster happens. Contrasting with the traditional response, the anticipatory actions (Green colored) are effective to reduce losses on lives and livelihoods timely because of the availability of triggers, effective early warning mechanisms, and pre-agreed activities and financing. So, the above figure evidence that if the humanitarian needs are identified in the present and early actions are taken, the response time will be shortened and the impact of disasters and crises can be minimized.

Considering the anticipatory action framework, each framework includes three primary elements which are reinforced by a clear learning, monitoring, and evaluation plan. The first one is robust forecasting embedded in a clear decision-making process (the model). Second, pre-agreed activities can alter the trajectory of the crisis (the delivery). And third is pre-arranged finance (the money). Anticipatory action is believed as an advanced and scientific tool in terms of reducing the losses of human life and properties.

**Figure 2:** Anticipatory action framework



*Source: Author interpretation*

Academic literature and empirical evidence show that three programs are particularly critical in anticipatory action those are timing, activity selection, and targeting.

First, the key feature that differentiates anticipatory action is timing for the humanitarian action that needs anticipatory action has to be selected as per the local need and context earlier in the shock trajectory. Anticipatory action extends the choice set of options available to households to mitigate the shock impact (Pople et al., 2021). Therefore, the triggers should be designed to balance forecast performance against the lead time needed for operational readiness and the choices available for the households at different points in time. To identify windows of opportunity, it is used crisis timelines to map out the progression of the shock, the resulting humanitarian needs, and the key moments in which action could change the course of the shock impact. For instant, an impact evaluation led by the University of Oxford and the Center for Disaster Protection (People et al., 2021) found that cash transfers received in advance of extreme flooding in Bangladesh not only provided immediate relief by protecting food security but also assisted households to change their behaviors to mitigate the flood impact. After three months, recipient households had higher food consumption, well-being, and earning potential compared to non-beneficiaries. These effects were largest for households who received the cash earlier relative to the flood trajectory. Nevertheless, the evidence base on the optimum timing of response remains short and continued learning is needed.

Second, with longer time plan of action before a disaster and anticipatory action creates an opportunity to select the most

impactful activities, which not only respond to immediate needs but also build resilience. Much of the literature shows the effectiveness of cash in mitigating the negative income effects of shocks, including humanitarian settings (de Janvry et al., 2006; Del Carpio and Macours, 2010; Aker et al., 2016; Asfaw et al., 2017; Doocy and Tappis, 2017; Jensen et al., 2017). Cash or other supports can be easily delivered through mobile technology and is portable during displacement. In-kind assistance may be effective in cases that require investments into infrastructure and other public goods for example construction or cleaning drains in response to the flood. Anticipatory action has created important questions about the quality of assistance provided for example size of cash and the expected duration of its impact in a protracted crisis setting. Operational readiness and the capability to act quickly upon trigger activation are the key challenges in the selection of activities, especially in sudden-onset disasters. Though funding can be released almost immediately upon a trigger activation, delays in procuring and stockpiling of items directly affect the time ensuring the well-prepared.

Third, identifying and targeting the most vulnerable households can present challenges. Anticipatory action seeks to minimize the disaster impact by acting earlier and ensuring the scientific targeting following the accuracy and identifying accurate households that are most impacted by the shock ex-post. Targeting decisions make on the combination of baseline vulnerability and the shock impact. Given that the latter is challenging to predict in data-scarce environments, targeting to date has typically focused on baseline vulnerability. Often, baseline vulnerability is so high that we adopt a “no regrets” approach, meaning that even if the shock does not materialize as expected, the assistance will still have a positive impact. By acting earlier, anticipatory action provides the time and space needed to carry on joint targeting across humanitarian agencies including the government.

### Material and Methods

I have adopted an integrative approach while developing this paper. Available secondary information is collected and analyzed from a range of published documents including journal articles, case study reports, project evaluation reports, and practitioners' as well as academicians' insights into the concepts and practices of the anticipatory action. Additionally, empirical pieces of evidence are collected by reviewing project documents of the Nepal Red Cross Society, IFRC, UN OCHA, and WFP. Those organizations are implementing the project on anticipatory action in Nepal as well as globally. The findings and recommendations in this paper will contribute to academic knowledge on anticipatory action. Additionally, it provides many thoughts to the government, humanitarian agencies, development partners, and community people to scale up anticipatory action in the future in Nepal.

### Core principles

Each anticipatory action adapts the framework to the local context. Agencies working on anticipatory action like the International Federation of Red Cross and Red Crescent Society (IFRC), Nepal Red Cross Society (NRCS), World Food Program (WFP), and United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) have

identified nine core principles for the piloting and implementing anticipatory actions.

Prioritizing a multi-sectoral approach	The humanitarian agencies who are working in anticipatory action should prioritize multi-sectoral, co-targeted interventions as per the possibility to maximize collaboration and co-funding expecting better achievement and impact.
Ensuring the centrality of protection	In line with the national and international protection policy, and respecting the sustainable development goal (2030) agenda, the principle of 'leaving no one behind', all partners implementing anticipatory interventions have the responsibility to ensure that their response will not intensify the exposure of communities to risks of violence, insecurity, threats, and exploitation. Anticipatory actions also ensure that all the people and groups of people who are always at risk like vulnerable communities, displaced communities, returnees, and refugees are a priority by the support based on their needs, with due attention given to obstacles linked to gender, age, disability, and social affiliation.
Promoting accountability to affected populations	Agencies working to promote an anticipatory action framework are responsible for the integration of accountability to affected populations approaches in their activities. This includes making all efforts to ask, hear, and act upon the voices and priorities of affected people including the most marginalized and at-risk women, men, girls, and boys in a coordinated manner, before, during, and after anticipatory action. It also means ensuring that community feedback leads to corrective action in future anticipatory action.
Supporting localization	Agencies working in the implementation of the anticipatory action framework are expected to integrity of the IFRC's global agendas and HCT's commitment towards localization. Justifiable and need base partnerships with local actors building upon their long-term relationships and trust with communities during anticipatory action are crucial.
Engaging with partnerships	Collaboration across humanitarian actors is key to ensuring that all sectors are engaged and that assistance is mobilized according to the anticipatory action framework.

Using cash where possible	Agencies working in anticipatory action encourage cash support after the disaster happens but it has to be read in the present. Likewise, OCHA encourages the use of cash as the default assistance modality where markets and operational contexts permit.
Generating development co-benefits	Agencies are encouraged to consider how financing for anticipatory action can complement financing for development by reducing suffering and addressing the root causes of vulnerability. For example, if the pre-agreed anticipatory action plan includes the repair or cleaning of the drain, implementing agencies should ensure that the quality of the repairs or cleanness will last beyond the immediate humanitarian crisis.
Capturing learning	Monitoring, evaluation, and learning activities should be embedded at every phase of the development and implementation of the anticipatory action framework.
Striving for integration	The framework seeks to integrate the anticipatory action activities into the existing humanitarian architecture and to foster linkages with the long-term programming, including resilience and development initiatives.

**Expected outcomes of the anticipatory action**

While discussing and practicing on expected outcomes of anticipatory action, humanitarian agencies agreed that success could be considered at different levels like an individual, household, institutional, and humanitarian system. Reducing humanitarian needs is critical, as is improving the longer-term well-being of vulnerable people. These objectives are linked, with anticipatory action leading to improvements in humanitarian interventions and ultimately, better outcomes for individuals, households, and communities. As per the literature review, key informants had different views on the time dimension in which outcomes needed to occur essentially, some are more focused on short-term outputs and outcomes associated with specific events mostly rapid-onset ones such as floods, and others more concerned about longer-term outcomes, like strengthening resilience to repeated shocks and stresses. Reviewing the literature and practices, outcomes of anticipatory action can be measured at institutional and individual/household levels. In this section, I discuss the key expected outcomes of anticipatory action at institutional and household/individual levels.

Firstly, on the topic of the institutional level, the capacity building of institutions to act and respond on anticipatory action is important, it is required to shift in humanitarian disaster management culture, priorities, and policies as per the emerging need and priority of the community for effective and timely service delivery. Reducing disaster response time and cost, and strengthening the resilience of institutions are the key aspects of capacity building of

institutions for the timely and effective implementation of anticipatory action.

Secondly, protecting the lives of individuals, livelihoods, and critical infrastructures, minimizing losses, ensuring faster recovery, protecting food security and nutrition, mitigating physical and psychological losses, and strengthening the resilience of individuals and households are the key expected outcomes of anticipatory action.

### **Empirics on anticipatory action**

Empirical study reports show that the impact of anticipatory actions based on the weather forecast has been seen the positive in terms of cost-benefit- analysis to condense the impact of floods, draughts, and cold waves. A recent study in Ethiopia, Kenya, and Somalia suggests that action taken to reduce drought impacts before price rises and before people resort to negative coping strategies is cost-effective compared to a later response. A study carried out by the WFP and UNICEF in emergency preparedness interventions in Chad, Madagascar, and Pakistan reveals a positive impact in terms of cost and time savings in humanitarian response (Meerkatt et al., 2015). The study includes a wide range of preparedness investments, much of which is beyond the scope of what anticipatory action systems could deliver like infrastructure projects. However, it also looks at the pre-positioning of emergency supplies for early response, which has been implemented as an early action triggered by forecasts in some existing anticipatory action systems.

One of the few peer-reviewed journal articles on outcomes of anticipatory action assesses the possible cost-effectiveness of drought-related anticipatory cash transfers that could be triggered by a forecast before the harvest, compared to later cash transfers after the harvest in five Kenyan districts (Nobre et al., 2019). It finds the early cash transfer to be more cost-effective than the post-harvest cash transfer in preventing hunger in years with low yields. This finding holds nevertheless of price variations which are tested through a sensitivity analysis and even when false alarms are considered. Forecasts with perfect accuracy would be cost-effective six months ahead of the harvest, but even transfers based on less accurate forecasts with a higher probability of false alarms are cost-effective for at least one of the lead times before the harvest.

Implementing forecast –based-financing and anticipatory action in Bangladesh, the Red Cross Red Crescent Climate Centre undertook a progressive case study to assess the potential value of anticipatory cash transfers. This study compares a scenario where cash is transferred roughly three days before a potential flood based on flood forecasts with two alternative scenarios. The first one is where floods happen with no humanitarian response and another one is where cash transfers are delivered after flooding takes place. Taking the possibility of a false alarm into account, it is estimated that every US\$1 invested in the anticipatory action program would lead to US\$3 saved in beneficiary losses.

Evidence shows that the positive impact of anticipatory action to reduce the humanitarian need and the burden on response systems post-shock was demonstrated through a series of actions taken by the International Federation of the Red Cross (IFRC) in West and Central Africa in 2008, based on a seasonal forecast indicating flooding (IFRC, 2009;

Braman et al., 2013). These actions included prepositioning relief items, improving disaster response capacity through training, development of flood contingency plans, and launching of pre-emergency funding requests for preparedness activities and response' (IFRC, 2009). At the time, this represented a significant shift to more proactive disaster management by the Red Cross Red Crescent Movement. It resulted in a significant time saving, where most countries had access to the required supplies in a matter of days, instead of the 40 days delay in starting flood operations in 2007. Early action and flood response in 2008 together cost 33 percent less per beneficiary than the flood response alone in previous years. Data also indicates that the number of lives lost relative to the number of people affected was lower in 2008 than in 2007. However, in the absence of better data about the severity of flooding, response times, and delivery of interventions, increases in lives saved cannot be attributed directly to anticipatory action (Braman et al., 2013). Such information would be needed to establish whether events of both years were of similar magnitude and would have resulted in similar levels of impact in the absence of any early action or late response. A recent study of actions implemented by WFP and the government of Nepal to address floods looks at the potential humanitarian return on investment from delivering information and advice to farmers, the formation of emergency teams, emergency stockpiling, preparing and distributing emergency kits, evacuations and preparing shelters (WFP, 2019).

Study shows that women-headed households were also affected to a greater degree by shocks than male-headed households and experienced fewer advantages from the primary crop introduced by the intervention, potentially linked to them cultivating smaller plots with less irrigation and a smaller workforce. This finding highlights how a certain type of anticipatory action in this case a shift in crop production benefits different people to varying degrees, and where additional support for anticipation and response might be required. Outcomes on the effectiveness of humanitarian systems at the household level, the most commonly assumed outcomes of anticipatory actions are a reduction in economic losses and changes in consumption. Some studies consider additional aspects, such as debt reduction, psychosocial well-being, a continuation of livelihood activities, and school attendance depending on the type of action. The evidence suggests that anticipatory action is better for households and from a donor, humanitarian, or development agency perspective than no intervention. However, establishing whether anticipatory action is also better than doing other preparedness and mitigation activities or taking action at a different point in time like before or after a shock needs further testing.

### **Initiatives in anticipatory action in Nepal**

Monsoon flooding is one of the most common environmental hazards in Nepal (NDRRMA, 2022). It is estimated that more than 6,000 rivers and rivulets are in Nepal flowing from north to south. Among these, snow-fed rivers, such as the Koshi, Narayani, Karnali, and Mahakali, are continuing rivers. They originate from the Himalayas, and snow-covered mountains, and pass through the hills to the Terai plains. During the monsoon (June-September), these rivers swell and cause damage to the villages, crops lands, people, and livestock remaining within the river basins. Historical

data shows that Nepal witnessed major floods in the Tinao basin (1978), Koshi River (1980), Tadi River Basin (1985), Sunkoshi Basin (1987), and a devastating cloud burst in the Kulekhani area (1993) which alone claimed the lives of 1336 people (Nepal Disaster Risk Reduction Portal). Flooding usually occurs following high-intensity rainfall once the rivers are already at bank-full conditions.

On average, floods cause over 175 deaths each year, and average annual economic losses exceed 140 Million USD. Nepal is the tenth highest country in the world in terms of relative physical exposure to fluvial flooding, exposing possible damage to physical assets as a value equivalent to 1.4 percent of its GDP. In 2017 only, monsoon floods affected 1.7 million people. At least 140 people were killed, and it was estimated around 80 percent of the Terai was flooded. The Government report on this flooding summarizes that 41,626 houses were completely damaged, 150,510 houses partially damaged, and 460,000 people were displaced. Furthermore, 126,282 hectares of paddy, 812,000 poultry, 9,400 cattle, and 74,000 sheds were damaged. Around 961 irrigation schemes and river, infrastructures were damaged (Nepal: Flood Risk Sector Assessment report – ADB, 2019 and DRR portal, Nepal). In Nepal, UN agencies like UN OCHA, UNFPA, UNICEF, UN Women, WFP, and WHO; Nepal Red Cross Society, and other humanitarian agencies are engaging in anticipatory action and forecast-based-financing to reduce the anticipatory risks targeting those most vulnerable communities in the flood-prone areas. Below sections of this paper highlight the key actions taken by the Nepal Red Cross Society, UN OCHA, and WFP focusing on anticipatory action in the flood-affected districts of Nepal.

Anticipatory action is the priority action area of the Red Cross and Red Crescent Movement. The anticipatory mechanism seeks to connect humanitarian practitioners with scientists and meteorological agencies to adopt joint early action protocols (EAPs) based on defined danger thresholds to automatically disburse funding and stage early actions before disaster strikes (IFRC operational Framework for Anticipatory Action 2021-2025). Building on the successful piloting efforts in recent years, the objective of the Red Cross now is to scale-up and mainstream anticipatory action as an approach across disaster risk management and climate change adaptation frameworks, plans, and policies. Scaling up anticipatory action requires more funding to expand and strengthen local capacities. It also means expanding the geographic coverage and types of hazards that can be anticipated, as well as the ability and capacity of the system to act collectively in a coordinated manner before a disaster occurs. Red Cross highlighted strategic priorities, measurable indicators, and the means to achieve the targets on anticipatory action.

Nepal Red Cross Society is implementing forecast-based-financing and shock-responsive social protection (FbA-SRSP) project in Gulariya, Thakurbaba, and Barabardiya Municipality of Bardiya district; Tikapur Municipality, and Janaki Rural Municipality of kailali district of Nepal since 2012.

Figure 3: Red Cross project implementing district map



Source: Nepal Red Cross Society FbA-SRSP project document 2020-2022

The project aimed to build a replicable mechanism for anticipatory action based on experience and evidence collected and tested on the ground, to strengthen the capacity of the government of Nepal and humanitarian stakeholders to implement forecast-based action and shock-responsive social protection for floods and cold waves. The project focused on the major activities under the eight components of the anticipatory action framework in the project-implementing municipalities.

Figure 4: NRCS monsoon-focused anticipatory action framework

Anticipatory action area	Activities
Message broadcasting	Message development, media selection, developing messaging mechanism, taking consent, training local volunteers for proper messaging, and disseminating messages ensuring that those messages are disseminated properly.
Drains Cleaning	Identifying and mapping the drains in flood-prone areas by using GIS technology, disseminating the message to keep the drains clean via FM radios one week before the onset of the monsoon season, identifying the people who monitor block drains, and drains cleaning by mobilizing local people.
Strengthening embankment with sandbags	Identifying and mapping the places where embankments need to be strengthened using GIS technology, stockpiling necessary sacks to fill up sand, mobilize the local people to fill up the sacks with sand.
Assist the most vulnerable households in need of special assistance with harvesting.	Identifying the farmland and listing out the plot of lower land owned by the people with complete disabilities and widows; preparing a map with the help of the GIS technology, identifying and supporting the household in harvesting.
Water purification	Identify and list out the households in high-risk flood-prone areas that need to purify water, manage water purifying equipment or medicine and Jerry Cans, and transfer water purification knowledge and skills to the households.

Cash transfer	Develop a plan of action and standard operating procedure for cash transfer, and distribution of cash as per the need.
People, livestock, and property evacuation	Identify the most vulnerable households, identify the safe places as per the timing of re-flooding, mapping of the safe evacuation routes including the alternative route, identify basic needs like shelter, toilet, drinking water, clothes, and food items, evacuate the people, livestock, and property as per the need.
Community engagement and accountability	Develop and roll out complaint handling mechanism at the community level respecting the voices of beneficiaries, and respond the complaint reported by the beneficiaries.

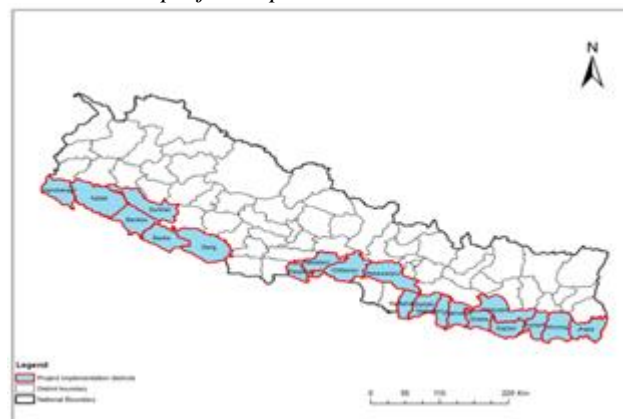
Information source: NRCS FbA-SRSP project document 2020- 2022

The above figure shows that the Nepal Red Cross Society adapted anticipatory action framework includes general actions, early warning message dissemination, drains cleaning, strengthening embankment with sandbags, assisting most vulnerable households in need of special assistance for harvesting, water purification, cash transfer, evacuation, and complaints handling. Under the theme of the framework, several activities are carried out as anticipatory action activities aiming to reduce the losses on the lives and livelihoods of local inhabitants.

key achievements under anticipatory action observed in this study are the social security allowances system is interlinked at the local level to perform early actions and early response, flood exposure data-based planning and decision-making process is in practice, early actions are incorporated into local policies, strategies, and plans, flood standard operating procedure is developed and roll out, early warning communication channel has been set up. Likewise, local government officials and community volunteers are capacitated in anticipatory action, emergency shelters are supported to households, promoted indigenous practices, for example, a local gauge station has been established in the Karnali river basin which is used for regular monitoring by local people. Replicated good practices in anticipatory actions within the other project areas implemented by the humanitarian agencies. For example, American Red Cross, Finish Red Cross, and Danish Red Cross are replicating the same approaches in their programming. Real-time simulation based on the framework of an early action helped to test the procedures on forecast-based action. More importantly, a total of 18791 community people received clear messages on early warning and early actions, and 419 households received cash grants including ready-to-eat food, and non-food relief items (NRCS FbA -SRSP annual report 2022).

UN OCHA implemented anticipatory action in the 19 flood-affected districts of Nepal. The project is implanted by five UN agencies- UNFPA, UNICEF, UN Women, EFP, and WHO with the help of the Nepal Red Cross Society (NRCS) and national Non-governmental organizations (OCHA, 2021)

Figure 5: Map showing the OCHA's anticipatory action project implemented districts.

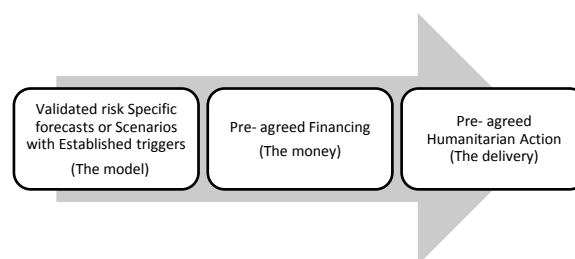


Source: Piloting anticipatory action country framework and approaches internal briefing note, (OCHA, 2021)

The objective of the project was to provide collective anticipatory humanitarian action to the people at risk of predicted severe monsoon flooding in Nepal. This aimed to provide life-saving assistance to over 80,000 people across 23 flood-prone municipalities of province-1, Madhesh province, Lumbini Province, and Sudurpaschim Province of Nepal. The approaches depend on a two-step trigger system. The first one is a readiness trigger based on the GloFAS forecast, which will provide a maximum of 7 days lead time and the second one is an action trigger based on the datasets from the government system's flood warning system and the GloFAS forecast, which can provide a lead time ranging from three hours to three days.

OCHA focused on three major models to promote anticipatory action, those models are developed and implemented in a consultative and participatory manner. This process from planning, design, and implementation, as well as monitoring and evaluation, was facilitated by OCHA headquarters and global-level partners.

Figure-6: Anticipatory action framework adapted by OCHA



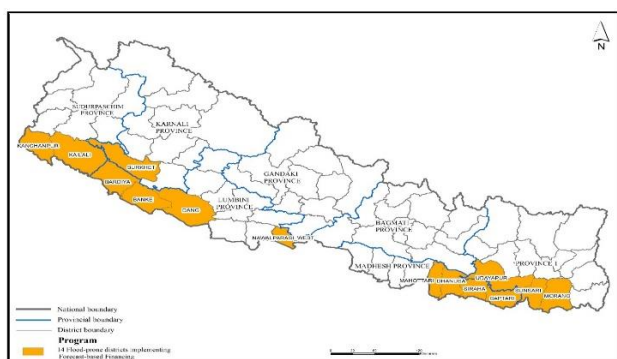
Source: Piloting anticipatory action country framework and approaches internal briefing note (OCHA, 2021).

After reviewing the documents, it was found that OCHA is implementing many activities directed to water, sanitation/hygiene, health, protection, and multi-propose cash. Key focused activities under the framework are to reduce morbidity and mortality by promoting water, sanitation, and hygiene; mitigation of flood-related health impacts including maternal death, and menstrual health, equipment support to health institutions, conditional cash grant support to pregnant women to facilitate referral and access to obstetric services, supports on protection, gender,

and inclusion. Likewise, awareness-raising sessions, distribution of dignity kit, conditional cash grant supports psychosocial support, support on reduction of negative coping strategies, and distribution of relief package are the key intervention areas by OCHA. The achievement measured in this study are promoting local and modern science and technology, developing and strengthening forecast-based -financing and anticipatory action mechanism, and standard operating procedures (SOP) for forecast-based disaster response actions have been formulated and integrated those SOPs into government plans. For example, forecast-based disaster response activities or priorities are incorporated into district disaster preparedness and response plan (OCHA, 2021).

The World Food Programme (WFP) has been working on anticipatory action since 2015 engaging with government and local partners from the central to the ward level to build the evidence base on the benefits of investing in anticipatory action by developing thresholds and triggers for river flooding based on context analysis focusing to 14 most flood-prone districts in Nepal.

**Figure 7:** World Food Programme forecast -based-financing and anticipatory action project implemented districts.



**Source:** Forecast-based Financing in Nepal: A return on investment study report (WFP, 2019)

The key results measured in the WFP's project are disseminating flood early warning information to the vulnerable community, developing and testing national and community level standard operating procedures for anticipatory actions to river flooding such as cash-based transfers, in-kind food baskets, crop, and livestock storage, improving risk analysis and targeting, capturing evidence in the forecast -base- financing. Assessed and identified flood risk thresholds for low, medium, and high-impact events, developed forecast triggers, and facilitated the development of anticipatory actions in the project implemented. Additionally, preparedness actions are undertaken on an annual basis, earlier in the monsoon season. To ensure national ownership and continuity, the FbF modality is embedded into the Nepal strategic action plan for disaster risk reduction and management 2018-2030. Supported strengthening the forecasting capacity of national hydro-meteorological services, enhancing national and community early warning systems to develop thresholds and triggers for agricultural drought, and creating seasonal climate forecasts and decision-making tools for agricultural sectors'

institutions to be able to better implementation of anticipatory actions (WFP, 2019).

Recently, responding to the unseasonal flood in 2022, WFP distributed a non-conditional cash grant to the flood-affected households in Kailali and Bardiya districts in the partnering with the Nepal Red Cross Society.

**Table 1:** Non- conditional cash grant distribution details – 2022

District	Municipality/ Rudra-Municipality	Total number of beneficiaries (HHs)	The amount distributed per Households
Kailali	Tikapur Municipality	2916	15000
	Bhajani Municipality	1993	15000
	Janaki Rural-Municipality	1288	15000
Bardiya	Rajapur Municipality	3902	15000
	Geruwa Rural Municipality	2811	15000
	Thakurbaba Municipality	860	15000
	Madhuban Municipality	441	15000
<b>Total</b>		<b>14211</b>	<b>213,165,000.00</b>

*Data source: Cash distribution report (Nepal Red Cross Society, 2022)*

Above table demonstrates that in total NPRS. 213,165,000.00 non-conditional cash was distributed to the 14211 households in Bardiya and Kailali district during the unseasonal monsoon flood in 2022. Data shows that cash grant-supported households in Rajapur Municipality of Bardiya district 3902 which is the highest number of households followed by 2916 in Tikapur Municipality of Kailali district. Likewise, 2811 households in Geruwa Rural Municipality of Bardiya, 1993 households in Bhajani Municipality in Kailali, 1288 HHs in Janaki Rural – Municipality of Kailali district, 860 HHs in Thakurbaba Municipality of Bardiya district, and 441 HHs in Madhuban Municipality of Bardiya district received non-conditional cash grant. A return-on-investment analysis in 14 districts showed that for each dollar invested, US\$34.39 is saved after the deduction of the investment costs, over 20 years (WFP, 2019).

**Lessons for the future**

Evidence shows that false alarms further intensify the challenges. So, envisioning scientific weather forecasting and reliable triggering, it is mandatory to invest in the capacity building of concerned government institutions. Advocacy around the benefits of anticipatory approaches at the local level has to be strengthened for the overall adoption of anticipatory approaches to scale up and as a sustainable disaster risk reduction and management. In Nepal, the department of hydrology and meteorology issues flood forecasts, but without sufficient lead times or timely communication, mechanisms to tolerate anticipatory actions

in potentially affected communities. In addition, there is a gap between early warnings and anticipatory actions, preventing mitigation measures from taking place and thus suffering immense flood-associated losses. Accepting this reality, scientific flood forecasts, and triggering mechanisms should be developed with sufficient lead time. Impactful anticipatory action delivers the right assistance at the right time, to the right people so that people have the resources and knowledge to navigate extreme shocks on their terms. The quality of anticipatory action depends in large part on the preparatory work that is invested to develop the programs. Coordination among the agencies during the design and implementation phase of the programming is the critical factor that ensures a whole society approach such as through joint targeting and the delivery of multi-sector packages this needs to be strengthened in the future.

To further scale up anticipatory action in the future, it is key to understand preparedness and pre-positioning requirements and explore complementary financing options. The physical movement of money is found slow and for scaling up anticipatory action institutions may need to step up themselves. Discussing the forecasting, if the window of opportunity is very short, for example, three or seven days, the physical movement of funds can be a bottleneck. For sudden onset, certain anticipatory action are only feasible if the agency has sufficient capital to pre-finance. Planning, monitoring, and evaluation are essential aspects of effective anticipatory action, different settings will require different ways of planning, implementing, and monitoring anticipatory action. Implementing agencies need to agree on a common analytical framework to undertake and assess anticipatory action which can help promote alignment in evaluation methodologies so that they accommodate differences but are similar enough for there to be cross-country, cross-hazard comparisons.

The first national dialogue on anticipatory action in Nepal, in 2022 recommended that resources should be planned to provide specifically targeted forecasting including better early warning systems that do not only apply to major river streams but also small streams and tributaries. An early warning system should be developed focusing on multiple hazards like a heatwave, cold waves, droughts, and so on in Nepal guaranteeing sufficient investment. Information should go together with the analysis of the potential impacts on the communities and also the linkage between different weather parameters like rainfall, temperature, and water level. Early action needs to be people-centered, and the system should be co-designed with the community. Protection, gender, inclusion, and accessibility should be central to defining and implementing anticipatory action. The approaches should not be limited only to life-saving activities, but they need to consider the boarded scope of socio-economic impact. Accepting risk communication as an essential part of anticipatory action, early warning messaging should be clear, effective, and accessible to all vulnerable groups focusing two ways flows. Incorporation of early action and trigger mechanisms into the local level preparedness plan, developing and maintaining integrated data to support preparedness, anticipatory action, and timely response, which can be combined with development databases such as the social protection system. Existing diverse practices on anticipatory actions should be built up

on a standard definition of anticipatory action, which must be common for all disasters to ensure that the government and agencies have a common understanding and uniformity in the framework (National dialogue on anticipatory action report, 2022).

## Conclusion

Studies show that anticipatory action can be an effective way of working to reduce the impact of the anticipated disaster. This approach is limited compared to the borders disaster management framework/continuum because sometimes the triggers may not be scientific and the data might be limited but it adds value in contexts of the landscape is poor and there is no clear indication about the imminent extreme event. For instance, the Nepal Red Cross Society developed a formal anticipatory action framework but it was somehow challenging to implement due to the unavailability of sufficient data on most vulnerable households (NRCS annual report 2022). Literature and evidence tell us that humanitarian crises are increasing and happening more complex and connected over time like disease, global pandemics, conflict, and so on which need to be addressed together with weather-associated risks. Past experiences show that it is difficult to use a trigger that directly measures the impact of multiple shocks. However, there is evidence that anticipatory action may be effective in contexts where shocks are recurrent or cyclical. Interventions that reduce the impact of the shock have been shown to facilitate a quick recovery, sustaining resilience to future shocks (Jjemba et al., 2018; Pople et al., 2021). Moreover, preliminary investments have shaped both the infrastructure and attitude for acting earlier in a crisis, as evidenced by the integration of anticipatory action within government structures. Uncertainty in the timing of humanitarian action is often driven by unpredictable operational delays. Anticipatory action forces onward thinking and planning to make sure agreements with implementing partners and procurement are already in place substantially reducing the unpredictability in the timing of the humanitarian response.

Eventually, anticipatory action needs to be considered one of the best tools for building resilience in response to uncertain risks. Long-term strategies that reduce vulnerability, such as disaster risk reduction and poverty alleviation, are also important aspects to be considered. It might be important that anticipatory action has to be integrated into other structures, including formal government social safety nets which are practiced in many of the projects currently in Nepal and board. This study concludes that it has to be continued to make reliable and expanded triggers, and flexible programming so that anticipatory action design is as flexible as well as consistent ensuring the meaningful participation of households, communities, and local experts.

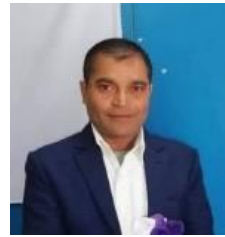
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## Author Profile



**Rudra Narayan Adhikari (I)** received a Master's degree in Social Science in 2018 and completed a **Master of Philosophy (MPhil)** in 2022 from Tribhuvan University, Nepal. Currently, I am undertaking my Ph.D. at the same university. Professionally, I am working for Nepal Red Cross Society Disaster Management Department in the position of deputy director since 2017 to until now. The author (I) have long experience in developing disaster risk reduction and management policy, guideline and frameworks, preparedness and response tools, and localization/globalization of those tools, and practices. I have shared my experiences and learning in disaster risk reduction/management among national and international stakeholders through attending several workshops, training, and meetings. I also presented various academic as well as research-based papers at several national and international conferences. Currently I am researching several issues of disaster risk reduction and management to way out better interventions for effective disaster risk reduction and management.