

FUNDING DISASTERS: TRACKING GLOBAL HUMANITARIAN AND DEVELOPMENT FUNDING FOR RESPONSE TO NATURAL HAZARDS

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Abstract

This study analysed international financial flows to nine countries (Kenya, Lesotho, Peru, Mozambique, Haiti, Vanuatu, Nepal, Indonesia, and DRC) for the 18 months after recent crises (drought, flood, cyclone, earthquake, and epidemic) to understand funding timelines and other features.

This is a diverse set of cases, but some interesting findings emerge. Very little funding (2.3%) was pre-arranged and often fast and flexible UN humanitarian funding played a crucial role in kick-starting the emergency response. While humanitarian funding for rapid-onset crises, which have a strong ‘CNN effect’, was often reasonably fast, funding for drought remains extremely slow. In fact, it is development rather than humanitarian actors that provide most (74%) of the funding; the World Bank is the biggest funder (50%) and also one of the slowest. Finally, the study found that low amounts of funding, and the delays in its arrival, has an unequivocal human cost, often with long-term consequences.

The study recommends that a greater proportion of funding is pre-arranged based on pre-agreed triggers for response. For unforeseen risks, a greater proportion of funding should be via fast and flexible mechanisms. Development partners should increase investment to support government-led crisis response and all actors need to work together to solve the problem of poor response to drought. The World Bank should consider how to speed up funding for crises and as more than half of all funding was in the form of loans, more work is needed to explore the role of loans in crisis response and recovery for the poorest countries.

¹ The order of author names has been randomised using the American Economics Association Author Randomization Tool.

About the report

Development Initiatives (DI) and the Centre for Disaster Protection have collaborated on this research to provide analysis of international financial flows to nine countries following recent crises to understand funding timelines and other features. The methodology was developed, the financial datasets constructed, and the analysis undertaken by Michèle Plichta from the Centre for Disaster Protection, Scott Waygood from the UK Government Actuary's Department, and by Niklas Rieger and Elle Crossley from Development Initiatives. The analysis was completed, the report written, and the project managed by Debbie Hillier. Extremely valuable insights were provided by Lydia Poole, Ruth Vargas Hill, Angus Urquhart, and Lena Weingärtner.

About the Centre for Disaster Protection

The Centre for Disaster Protection works to find better ways to stop disasters devastating lives, by supporting countries and the international system to better manage risks. The Centre is funded with UK aid through the UK government.

About Development Initiatives

Development Initiatives (DI) applies the power of data and evidence to build sustainable solutions.

Our mission is to work closely with partners to ensure data-driven evidence and analysis are used effectively in policy and practice to end poverty, reduce inequality and increase resilience.

While data alone cannot bring about a better world, it is a vital part of achieving it. Data has the power to unlock insight, shine a light on progress and empower people to increase accountability.

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● ABBREVIATIONS

ADB	Asian Development Bank	IDB	Inter-American Development Bank
AfDB	African Development Bank	IFRC	International Federation of the Red Cross
ALNAP	Active Learning Network for Accountability and Performance	IMF	International Monetary Fund
Cat DDO	Catastrophe Deferred Drawdown Option	INGO	International Non-Governmental Organisation
CCRIF	Caribbean Catastrophe Risk Insurance Facility	IOM	International Organization for Migration
CDB	Caribbean Development Bank	IPC	Integrated Phase Classification
CERC	World Bank Contingency Emergency Response Components	IRM	Immediate Response Mechanism
CERF	UN Central Emergency Response Fund	NGO	Non-Governmental Organisation
CFE	Contingency Fund for Emergencies (WHO)	OCHA	Office for the Coordination of Humanitarian Affairs
CRS	Creditor Reporting System	OECD	Organisation for Economic Co-operation and Development
CRW	Crisis Response Window	OPM	Oxford Policy Management
DAC	Development Assistance Committee	PCRIC	Pacific Catastrophe Risk Insurance Company
DFID	UK Department for International Development	PDNA	Post-Disaster Needs Assessment
DRC	Democratic Republic of the Congo	PEF	Pandemic Emergency Financing Facility
DRM	Disaster Risk Management	Sitrep	Situation Report
DRR	Disaster Risk Reduction	SRP	Strategic Response Plan
ECHO	European Civil Protection and Humanitarian Aid Operations	UNICEF	United Nations Children's Fund
FAO	Food and Agriculture Organization	USAID	United States Agency for International Development
FbF	Forecast-Based Financing	WASH	Water, Sanitation, and Hygiene
FTS	Financial Tracking Service	WFP	World Food Programme
GDP	Gross Domestic Product	WHO	World Health Organization
HSNP	Hunger Safety Net Programme		
IATI	International Aid Transparency Initiative		
IDA	International Development Association		

● EXECUTIVE SUMMARY

While the frequency of disasters and the cost of response, recovery, and reconstruction is increasing due to factors such as climate change, population shifts, increased fragility, and prolonged displacement, funding is highly constrained. It is therefore critical to ensure that funding is used in the most effective way possible, but crisis funding from both humanitarian and development actors is systematically late, causing suffering, needs, and costs to escalate.

This study by the Centre for Disaster Protection and Development Initiatives has been undertaken as part of the Centre's work to understand how international funding flows in a crisis. It complements the Centre's analysis of funding flows to respond to the COVID-19 pandemic, exploring similarities and differences for funding flows for natural hazards.

International funding often covers only a small part of the cost of crises (much can also come from national sources) and, in recent years, international technical and financial support has been provided to communities and governments to strengthen their resilience and build their capacity to absorb, adapt, and respond. Nonetheless, international funding continues to play a crucial role in supporting countries through major disasters, and thus identifying how this can be deployed most efficiently and effectively is crucial.

The cost of responding to disasters is highly dependent on the hazard and a range of contextual factors, but what is certain is that, once crisis needs are clear—certainly when appeals have been issued and national capacities have been overwhelmed—international funding should be made available swiftly and cheaply to reduce the short-term and long-term human and economic costs.

This study analyses international financial flows to nine countries for the 18 months after recent crises—drought, flood, cyclone, earthquake, and epidemic. The objectives are to investigate:

- a) the point at which funding from international sources becomes available during a crisis's timeline;
- b) how much of this funding is pre-arranged; and
- c) where possible, the factors influencing this funding and the implications of this for crisis response.

Methodology: We have selected a broad mix of cases to ensure that crisis funding can be considered across a range of different natural hazards (rapid-onset and slow-onset events), groups of donors, and income groups. All crisis events occurred during the last six years to generate insights relevant to the current crisis financing infrastructure.

The focus of analysis is international funding to the crisis response provided by donors and institutions, rather than domestic finance. The methodology builds on that undertaken by the Centre for COVID-19 financial tracking and includes funding from international financial institutions (the World Bank, the International Monetary Fund (IMF), regional banks, sovereign insurance); bilateral development funding from Organisation for Economic Co-operation and Development (OECD) donors; and humanitarian funding. We have looked for funding committed and disbursed in the 18 months after the crisis began, as well as just prior to this, to try and identify early funding. To supplement information from the public datasets (which we recognise are not complete), and to strengthen the analysis and conclusions, we have also undertaken literature searches on the nine crises.

Findings

Preparedness and planning pays off, but there is not enough of it: All governments and response partners have invested in disaster risk management (DRM) in recent years, and this has shown real dividends. However, there remain significant gaps. In Mozambique, for example, the United Nations Review notes that planning would have benefited from the use of anticipatory triggers based on early warning indicators, and questions why there were no early-action triggers for the Zambezi river basin that is periodically affected by severe flooding.

It has not been possible to fully assess whether enough funding was provided, as there is currently no agreed way of accurately measuring needs. However, the partial information we have suggests that **funding amounts are significantly less than required:** two months into the crises, United Nations situation reports (sitreps) record that appeals are funded at 30%–40%, meaning that responders have to ration funds and assistance, making hard choices about who gets support and who does not. Our analysis finds that there were still major gaps in funding against humanitarian appeals after six months for five of our nine cases; and while generous pledges were often made at reconstruction conferences, after 18 months only 15% (on average) of the Post-Disaster Needs Assessment (PDNA) had been committed.

The funding that was provided tended to be late: After six months, only 41% of total response funding had been committed, meaning that governments and responders were still largely unclear what funding would be made available for the response. They were still scrambling for funding, often competing with other implementing agencies for funds, and having to make plans in a very uncertain and shifting landscape. The amount of money being spent per crisis varied, but in most crises this was hundreds of millions of dollars. There are risks of diminishing efficiency and effectiveness when spending these major sums with so little pre-planning or clarity surrounding the big picture. Further, while a total of US\$ 6.84 billion was committed in the 18 months post-crisis, less than 64% was actually disbursed to the responding agencies and available to be spent.

One of the reasons for being late is that **very little funding is pre-arranged** (i.e. agreed in advance, and guaranteed to arrive if a certain set of circumstances arise). In the datasets, we found evidence of only 2.3% of the total funding being pre-arranged across four countries: the Catastrophe Deferred Drawdown Option (Cat DDO) in

Peru; sovereign insurance for Vanuatu and Haiti; and the Pandemic Emergency Financing Facility (PEF) for the Democratic Republic of the Congo (DRC). This funding was fast—the pre-agreed budget support (Cat DDO and sovereign insurance) paid out in less than two weeks. It is possible that there were some programmes with internal pre-agreed funding—such as that used by the United Nations International Children’s Emergency Fund (UNICEF) in the malnutrition surge programming in Kenya—but we were not able to quantify this, and it is at a much smaller scale.

We also found small **amounts of fast humanitarian funding.** Both the United Nations Central Emergency Response Fund (CERF) and the World Health Organization (WHO)’s Contingency Fund for Emergencies (CFE) have been specifically adapted to provide fast and flexible financing, and it shows. CERF funding was agreed swiftly (for Mozambique, all projects, apart from one, were approved within two days of the initial application) and allowed expenditures to be funded immediately after a crisis began, playing a crucial role in kickstarting the emergency response before other funds arrived. The total amount was US\$ 192 million, which may be a small part (2.8%) of total funding but represents a crucial part of first-phase emergency funding, at 11% of humanitarian funding.

Humanitarian funding for rapid-onset crises, which have a strong ‘CNN effect’, was often reasonably fast: Two months after the crisis began, Vanuatu had 94% of its humanitarian funding committed, Nepal had 84%, Indonesia 74%, Haiti 64%, and Mozambique 49%. In some cases, funding can be incredibly fast: US\$ 148 million, plus lots of in-kind support, was committed to the Nepal crisis in just the first week. After six months, more than 90% of humanitarian funding for rapid-onset crises had been committed, apart from Mozambique, which was somewhat behind with 81%.

But funding for drought remains very problematic: The accuracy of forecasts is improving, and thus it would be expected that substantial funding would be made available to support early action to mitigate the drought’s impacts before this led to wide-scale human suffering and that funding would be swiftly delivered when the appeal is made, because funding institutions will have expected the call for assistance. However, neither of these occurred at the right scale.

- **Early action:** In Kenya, some funding was surged and pivoted from longer-term programmes. This

represents very positive progress and reflects the focus on resilience and shock-responsive programming by government and others, but it remains extremely small in relation to needs. In Lesotho, some CERF funding arrived after one set of failed rains, but subsequent concerted advocacy from the United Nations Resident Coordinator and team after the next failure of the rains was to no avail.

- Prompt response to appeal: Funding did not arrive swiftly when the governments declared an emergency. After two months, funding committed for Kenya and Lesotho was 11% and 1% respectively, and at six months this was still only 41% and 25% respectively.

Development, not humanitarian, actors provide most of the funding (74%), with the World Bank as the source of 50% of the funding. In our dataset, no other institution comes close, with the next major funders (across both development and humanitarian actors) being the Asian Development Bank (ADB) (providing 15% of total funds) and the government of the United States (providing 9% of total funds and 35% of humanitarian funding).

The **World Bank is the biggest and also one of the slowest funders**, with only 65% committed after 12 months, compared to 94% for both regional banks and bilateral development donors. Only 44% of committed funding was disbursed at 18 months.

- Some of the slowness of longer-term funding is attributable to reconstruction projects, which would naturally occur later in the crisis timeline, and to government capacity to absorb the funding. However, not all the World Bank's support is for reconstruction and slow disbursement was present across projects and disasters. Considering that the World Bank is the largest funder and both commitments and disbursements come late in the crisis timeline, and also that the issue of timeliness has been raised by other analysts, there may be scope to improve.
- The World Bank's Contingency Emergency Response Component (CERC) mechanism can pivot significant funding (typically tens of millions of dollars) to a crisis; however, it is not clear how quickly this is disbursed. It is likely that more *ex ante* planning for CERCs will enable implementation to begin more quickly. CERCs are now being systematically included in the health portfolio, with plans to adapt triggers for greater sensitivity to health emergencies. This is very positive and increased planning like this offers real advantages for all CERCs.

Just over half (53%) of total funding committed was in the form of loans: Poorer countries borrow less—for the three countries with the lowest gross domestic product (GDP)/cap, loans represented 13% in Mozambique, 35% in DRC, and 48% in Nepal. The ability of poorer countries to finance response and recovery—and thus the quality and speed of their response and recovery—is determined by and limited to their ability to borrow; this likely needs a rethink. For other countries with more ability to borrow, governments have to trade off the long-term risks of not investing in recovery with the long-term risks associated with taking on more debt.

There remains too great a disconnect between humanitarian and development actors and approaches: In Kenya, some donors were reluctant to release funds before a government declaration of emergency, and some development actors still see crisis prevention as primarily an area of humanitarian expertise and responsibility. This contributed to a situation in which there was too little preventive action from development actors and too late preventive action from humanitarians. In Mozambique, while the value and need for a resilience approach is widely recognised, it is currently underemphasised and underfunded, with a clear divide between the development and humanitarian sectors in the cyclone response.

The lack of funding and delays in the arrival of funding has an unequivocal human cost: There are very clear and direct impacts in the emergency phase, where responders have to reduce the assistance provided to below international standards (for example, cutting food rations) and reduce the number of people who receive assistance, leaving many others in need. Delays in funding longer-term recovery and reconstruction can leave people without support for months and years, leading to widespread unmet needs. Such delays increase suffering and lead to negative coping strategies, often with critical impacts on women and girls, and also push people into debt. These short-term impacts can have very long-term consequences.

Recommendations

As many risks are understood and many crises can be predicted, all funding institutions, agencies, and actors should **provide a greater proportion of their funding as pre-arranged** based on pre-agreed triggers for response, such that pre-arranged finance becomes the primary method for funding crisis response by 2030. With the assurance that finance will arrive, governments and response partners can put systems in place in advance to ensure that this funding will be used most effectively. They can develop contingency plans for different scenarios and sophisticated plans for delivery: preselecting contractors, drafting memoranda of understanding, and considering how key elements (such as governance, logistics, essential services, communications, procurement, and electronic finance) might work in a crisis. Developing such a plan in advance supports public engagement, transparency, and accountability.

For unforeseen risks, all funding institutions, agencies, and actors should **provide a greater proportion of their funding via fast and flexible mechanisms**, giving governments and response partners the ability to scale up very quickly once the crisis has hit. Knowing that this funding is available could help responders plan and develop a surge capacity for swift scale-up. Such funds should be made available to preselected national and international non-governmental organisations (NGOs), as well as to United Nations agencies, to support a faster and stronger response.

Development partners should increase investment to support government-led crisis response: Investing in risk reduction, preparedness, and the systems and infrastructure to enable a nationally led crisis response will both reduce costs and put in place systems to effectively deliver response and absorb financing when crises occur. Development partners should design more programmes to be specifically shock-responsive such that

health, social protection, and other services can scale up smoothly and swiftly.

All actors need to work together to solve the problem of poor response to drought to enable greater quantities of funding to be released more swiftly as the situation deteriorates. All the recommendations above are particularly important for drought. This needs to go alongside agreed triggers and early actions, as well as greater coordination and integration between development and humanitarian sectors. Humanitarian funders should be standing by to release funding as soon as a drought appeal is made.

The **World Bank should consider how to speed up funding for crises:** This will require an increased focus on preparedness, working with governments to invest in the systems for response. It also requires introducing flexible triggers and *ex ante* planning for CERCs and the adaptation of the World Bank's Crisis Response Window (CRW) so that more funding passes through the Early Response Financing Framework with pre-agreed triggers.

Humanitarian and development thought-leaders, crisis analysts, and loan providers should explore the role of loans in crisis response and recovery for the poorest countries: They can use the space created by COVID-19 to consider needs, modalities, and limits for debt restructuring and natural disaster clauses in debt instruments.

This research has revealed some very interesting findings, but the authors recognise that the dataset was small and may have been skewed by particular crises. **This research should be expanded to a greater number of crises** to validate and explore these findings further (there may be a case for a global database of crisis funding flows), including considering the optimum speed for different types of crisis funding.

CHAPTER 1

● INTRODUCTION

The frequency of disasters and the cost of response, recovery, and reconstruction is increasing due to factors such as climate change, population shifts, increased fragility, and prolonged displacement. While these needs are increasing, funding is highly constrained, so there is an important need to ensure that funding is used in the most effective way possible. Yet crisis funding from both humanitarian and development actors is systematically late (Scott and Clarke, 2021). Due to this delay, needs and suffering—as well as losses and response costs—escalate, with major short-term and long-term consequences.

This study, undertaken by the Centre for Disaster Protection and Development Initiatives, has been undertaken as part of the Centre’s work to understand how international funding flows in response to a crisis. The Centre has undertaken a significant analysis of funding flows to respond to the COVID-19 pandemic (Yang *et al.*, 2021). The present study has been undertaken to complement it, as well as to explore similarities and differences of funding flows for natural hazards.

The cost of responding to disasters:

- is highly dependent on the hazard (for example, earthquakes, cyclones, and flooding cause major infrastructure damage, requiring significant reconstruction; droughts cause no damage to infrastructure but destroy crops and kill livestock, requiring long-term food assistance and recovery of livelihoods; most natural hazards are a major driver of displacement; and epidemics cause none of the above but require expanded health services and have a broad spectrum of economic impacts); and

- will vary enormously depending on contextual factors (such as the amount of development and infrastructure that was exposed; how prepared and capacitated the government and communities leaders are; the geographic remoteness of affected populations; levels of political stability and insecurity in the affected area; and whether people are able to heed early warnings—even a few days’ warning of a cyclone or flooding could enable people to move their assets out of harm’s way).

Thus many factors influence how much funding is needed in crises, but what is certain is that, once crisis needs are clear—certainly when appeals have been issued and national capacities have been overwhelmed—international funding should be made available swiftly and cheaply to reduce the short-term and long-term human and economic costs.

International funding often covers only a small part of the cost of crises.² In recent years, governments and communities in many of our case study countries have taken action to strengthen their resilience and build their capacity to absorb, adapt, and respond to crises, often with international technical and financial support. Our literature review found evidence that this has had an impact (see Box 1).

Nonetheless, international funding continues to play a crucial role in supporting countries through major disasters, so identifying how this can be deployed most efficiently and effectively is crucial.

This study analysed international financial flows to nine

2 Much funding comes from national sources, such as the government, alongside communities, remittances, and private insurance: see for example Becerra *et al.* (2014) and Weingärtner (2019).

countries for the 18 months after recent crises—drought, flood, cyclone, earthquake, and epidemic. The objectives were to investigate:

a) the point during a crisis’s timeline when funding from international sources becomes available;

b) how much of this funding is pre-arranged; and

c) other features of this funding and their implications for crisis response.

Box 1: Government action to prevent, prepare, and respond

All the countries in our sample are vulnerable to natural hazards and all the governments have invested in preparedness, resilience, and risk reduction to different levels. This has had a clear impact, but the countries were nevertheless overwhelmed by the scale of these hazards and international support was required.

- In the case of Vanuatu, the national disaster response capacity scaled up quickly and was satisfactory in meeting the needs of previous, smaller-scale disasters. However, Cyclone Pam was on an altogether different scale and national capacity was challenged both by the size of the disaster and the coordination of a huge international influx of support (Barber, 2015). The low death toll was attributed to investment in early warning and community preparedness measures. Nonetheless, the response highlighted a range of areas of preparedness and response that need strengthening for disasters on this scale (Pacific Community, 2016).
- In Kenya, around one-third of the population lives in arid or semi-arid counties that are particularly exposed and vulnerable to drought. In response, the Government of Kenya has taken an increasingly strong approach to DRM, including disaster risk

financing. As of early 2021, Kenya is the only country in Africa to have a disaster risk financing strategy and was the first to agree a Cat DDO. The response to the drought in 2016-17 was much better than the catastrophic 2010-11 drought, much of which was attributed to investment in resilience, stronger leadership, quicker action, and release of funds by the Government of Kenya. The government’s Drought Contingency Fund spent US\$ 1.7 million between July and December 2016 and emergency cash payments started to be disbursed through the Hunger Safety Net Programme (HSNP) before the government declared an emergency (Obrecht, 2019).

- Peru has intentionally focused on building their DRM capacity, with national laws, policies, and institutions that govern DRM and prioritise risk reduction, as well as funds for regional and local governments to use for risk reduction and response. The national government released a ‘Decree of Urgency’ in early September 2015 before the flooding to allocate funds and develop sectoral and geographic plans to reduce risk in key watersheds and strengthen infrastructure. Nonetheless, there remain challenges with coordination and decentralisation (Zurich Flood Resilience Alliance, 2017).

● METHODOLOGY

This methodology builds on that undertaken by the Centre for COVID-19 financial tracking (Yang *et al.*, 2021), with reference to that established by Weingärtner (2019). For a more detailed methodology of the development of the datasets, please see the Annex.

Case study selection

We selected a range of different natural hazards, including a mix of rapid-onset and slow-onset events, to explore the timeliness of funding in different crisis scenarios. The range of locations ensures that crisis funding can be considered for different groups of donors and across different income groups. All crisis events occurred during the last six years to generate insights relevant to the current crisis financing infrastructure. Events were chosen which could be identified on the Office for the Coordination of Humanitarian Affairs (OCHA)'s Financial Tracking Service (FTS) in the form of an emergency marker and/or a flash appeal to ensure a degree of reliability in identifying humanitarian funding to the crisis response.

Core datasets

The focus of analysis was international funding provided by donors and institutions rather than domestic finance. As outlined in the Centre's analysis of COVID-19, tracking international funding for crises is not as straightforward as might be expected.

For **humanitarian funding**, the primary source is the FTS.³ The FTS is a voluntary reporting platform (although with a concerted effort and mandate to track funding against Humanitarian Response Plans issued by OCHA),

and not all actors report consistently. In addition to funding from institutional donors, it also captures private humanitarian funding (where reported by recipient organisations).

For **funding from international financial institutions**, we undertook institution-specific searches: for the World Bank, the IMF, sovereign insurance, the Paris Club, and regional banks (African Development Bank (AfDB), the ADB, Caribbean Development Bank (CDB), and the Inter-American Development Bank (IDB)). We have included all projects that clearly mention the crisis and include elements to respond to it. It should be noted that, in some cases, only a part of the project is related to the crisis, so this method may overstate funding from these institutions.

For **bilateral development funding**, the OECD Development Assistance Committee (DAC) Creditor Reporting System (CRS) was used. This system does not tag funding flows to crises, so we undertook keyword searches on project descriptions and titles. Each individual CRS funding entry resulting from this process was manually verified to eliminate false positives and duplicates with humanitarian funding. Note that CRS data are only available until the end of 2019, leading to some gaps, and it has only been possible to assess the timeliness of funding using commitments and their associated commitment dates. Disbursements are only recorded on the CRS against calendar years, and therefore could not be used in our analysis. The quality of project or flow descriptions varies between different reporting agencies; keyword searches are therefore likely to underestimate bilateral development funding.

³ For a comparison of global data sources on funding flows to crisis response, see Weingärtner (2019).

To supplement these datasets, and to strengthen the analysis and conclusions, we also undertook literature searches on the nine crises.

Key parameters

- **Commitment and disbursement data:** This study wanted to explore both when funding was committed (noting that a ‘commitment’ is a legal obligation to provide funding) and also when it was disbursed, as there is always a delay between the two. However, we did not have full data on the disbursement side, so we focused primarily on commitment data. On the humanitarian side, the delay between commitment and disbursement is mostly due to administration and public financial management issues. For humanitarian spend, we assumed that the disbursement date was the same as the commitment date. This is a reasonable assumption because larger humanitarian organisations often start their work on the basis of a commitment.
- **Crisis start date:** This is straightforward for rapid-onset crises—the date of an earthquake, cyclone landfall, or first confirmed case of Ebola. For drought and (in Peru) flooding, we chose the date of the government’s declaration of emergency.
- **Analysis start date:** We sought to find funding committed or disbursed shortly before the crisis start date to capture anticipatory funding (this is particularly important for slow-onset crises). For the floods in Peru, we considered funding from when there were alerts on heavy rains (on 01 January 2017). There is no obvious start date for drought, and situations can be chronic if there are several seasons of failed rains—we therefore consider funding from the end of the season of failed rains before the United Nations appeal.
- **Analysis end date:** 18 months from crisis start.

- **Pre-arranged finance:** To qualify, such funding should be agreed in advance to be triggered if a certain set of circumstances arise, with a guaranteed amount and recipient; it includes insurance, contingent credit, and forecast-based financing (FbF). It does not include contingency funds or CERCs, as there is no planning regarding what sector it will be spent on, under what circumstances, or (in some cases) which organisation will receive it (i.e. where applications would be assessed on a competitive basis and there is no assured access to funding).

Limitations

We have worked hard to scour the datasets to identify relevant projects and prevent double-counting. However, not all donors provide full and clear information to databases; in-kind support is often not costed; and some institutions have opaque systems or do not provide complete information. Getting a full picture of financial flows is a complex exercise, and no doubt gaps and inconsistencies remain despite our best efforts.⁴

The analysis end date of 18 months was expected to be long enough to allow all funding plausibly related to crisis response to be counted. Having completed the study, it is now clear that disasters requiring major reconstruction had funding committed after this period (this was particularly apparent for the Nepal earthquake). Future studies should ensure a longer timeframe.

In terms of pre-arranged finance, there are likely to be some cases where agreements have been made with implementing agencies to enable them to pivot/repurpose funding for the crisis, such as flexible multi-year financing, crisis modifiers, or large project contingency funds. Unfortunately, these are often not revealed in the publicly accessible data underlying this research as this information is likely only available in donor reporting. We have searched for them in narrative reports about the response but are likely to have missed some.

⁴ There appear to be particular gaps in the financial data for the Ebola response, perhaps as this response had a much smaller role for OCHA. See Krubiner and Schnabel (2019).

Table 1: Case study countries and key dates

Hazard	Country	Crisis start date	Crisis start date based on	Analysis start date	Analysis start date based on	Date of government request for assistance	Date of launch of United Nations emergency appeal
Drought	Kenya	10/02/2017	Government declaration of emergency	31/12/2016	Long rains failed Oct-Dec 2016; United Nations warnings were given in Dec and on 01 Jan	10/02/2017	15/03/2017
Drought	Lesotho	30/10/2019	Government declaration of emergency	31/03/2019	Poor 2018-19 planting season; below-average rainfall forecasts for 2019-20. Analysis start date is end of 2019 failed rains	30/10/2019	19/12/2019
Floods and mudslides	Peru	20/03/2017	Government declaration of Level 5 emergency	01/01/2017	Heavy rains in January	29/03/2017	10/04/2017
Cyclones Idai and Kenneth	Mozambique	14/03/2019	Cyclone landfall	14/02/2019	One month prior to landfall	19/03/2019	24/03/2019
Cyclone Pam	Vanuatu	13/03/2015	Cyclone landfall	13/02/2015	One month prior to landfall	13/03/2015	24/03/2015
Hurricane Matthew	Haiti	04/10/2016	Cyclone landfall	04/09/2016	One month prior to landfall	04/10/2016	10/10/2016
Earthquake and tsunami	Indonesia	28/09/2018	Earthquake	28/09/2018	Date of earthquake	01/10/2018	05/10/2018
Earthquake	Nepal	25/04/2015	Earthquake	25/04/2015	Date of earthquake	25/04/2015	29/04/2015
Ebola epidemic	DRC	08/05/2018	Confirmation of first case	08/05/2018	Confirmation of first case	08/05/2018	27/05/2018

● CASE STUDIES

Our case studies included:

- three slow-onset crises with no fixed start date and where the crisis worsened over many months (droughts in Kenya and Lesotho and flooding/landslides in Peru);
- one slow-onset crisis with a fixed start date but where the crisis worsened over time (two back-to-back outbreaks of Ebola in DRC); and
- five rapid-onset crises: three cyclones (Haiti, Mozambique, and Vanuatu) and two earthquakes (Nepal and Indonesia, the latter also involving a tsunami).

This section will briefly describe the crises. As each crisis is so different, it is important to understand some of the context in order to interpret the financial data. See Table 2 for a summary of impacts and funding.

Kenya

The two main rainy seasons of 2016 (March–May and October–December) were severely reduced, bringing very low levels of rainfall, particularly in the arid and semi-arid lands. This resulted in widespread crop failure, acute water shortages, sharply declining terms of trade for pastoralists, and declining animal productivity, which had a devastating impact on food security and nutrition conditions.

- In August 2016, 1.3 million people needed humanitarian assistance (Integrated Phase Classification (IPC) Phase 3 and above).⁵

- By January 2017, this had increased to 2.6 million people (20% of the pastoral population and 18% of those living in marginal agricultural areas).

The Kenyan government declared a national drought emergency in 23 counties in February 2017, which enabled a United Nations flash appeal in March, requesting US\$ 165.71 million for 2.6 million people for 10 months. The United Nations sitrep reports that this was 27% funded after two months.

Unfortunately, the situation worsened; the 2017 long rains (March–May) ended early in many areas, leading to a third successive poor or failed harvest. By May 2017, there were 343,559 acutely malnourished children and by September 2017, 500,000 people were at IPC Phase 4 – ‘Emergency’ – and the number of people facing severe food insecurity (IPC Phase 3) was expected to increase by 800,000.

Lesotho

Lesotho suffered a series of poor harvests and droughts in a slowly worsening situation. The 2018/19 planting season coincided with El Niño-induced dry conditions: rains started over a month late, with cumulative below-average rainfall. In May 2019, 487,857 people were in IPC Phase 3 or higher, of which 42,953 were in IPC Phase 4. By October 2019, the situation had worsened due to poor rains in some parts of the country, such that 508,125 people—more than a quarter of the population—were

⁵ IPC describes the severity of food emergencies.

IPC Phase 3 is ‘Crisis’: households have food consumption gaps that are reflected by high or above-usual acute malnutrition OR are marginally able to meet minimum food needs, but only by depleting essential livelihood assets or through crisis-coping strategies.

IPC Phase 4 is ‘Emergency’: households either have large food consumption gaps which are reflected in very high acute malnutrition and excess mortality OR are able to mitigate large food consumption gaps, but only by employing emergency livelihood strategies and asset liquidation.

IPC Phase 5 is ‘Famine’.

facing severe food insecurity (IPC Phase 3), of whom 71,807 were in IPC Phase 4. On 30 October 2019, the Government of Lesotho declared a drought emergency, followed by a United Nations appeal on 19 December for US\$ 33.7 million to cover five months.

Peru

The coastal El Niño in Peru, which started in late 2016 and continued through early 2017, generated heavy rainfall, floods, and landslides in the coastal and highland districts of northern Peru. The relentless water and mud (which carried dangerous debris) destroyed roads, bridges, businesses, and homes, as well as crucial farmland. This situation had an impact on approximately 1.7 million people, which includes 162 deaths and 500 people who were injured. Nationwide, over 200,000 homes were affected.

The response was led by the government, which has considerable capacity and funds. On 23 February 2017, a supreme decree was released declaring emergency in the districts of Tumbes, Piura, and Lambayeque. On 29 March, the government declared a Level 5 emergency (the highest level on the national emergency scale) in the region of Piura, which opened the event to national and foreign aid and response support (Venkateswaran *et al.*, 2017). A United Nations flash appeal for US\$ 38.3 million was launched on 10 April 2017, which was reportedly 38% funded after two months.

Haiti

Hurricane Matthew, a Category 4 storm with sustained winds of 235 km/h, violently struck southwestern Haiti on 04 October 2016 causing widespread damage, flooding, and displacement. Over 2 million people, about 20% of Haiti's population, were affected: 546 people were killed, more than 175,500 people sought refuge in shelters, and about 1.4 million people required immediate humanitarian assistance. The hurricane's impact added to high pre-existing humanitarian needs throughout the country, on top of high poverty levels and underlying and chronic risks and vulnerabilities.

A United Nations appeal was quickly launched and revised to US\$ 139 million for the first three months; after two months this was reportedly 48% funded. The Humanitarian Response Plans for 2017–18 and 2018–19, highlighted that nearly 1.4 million and nearly 1 million

people respectively affected by Hurricane Matthew still needed some form of humanitarian assistance. A PDNA was undertaken which estimated the damage and losses to be the equivalent of 22% of GDP.

Mozambique

On 14 March 2019, Cyclone Idai made landfall near Beira, bringing winds of 180–220 km/h and heavy rains across several provinces. This caused huge storm surges and extensive flooding with floodwaters reportedly exceeding 10 meters; 90% of Beira city, with a population of about half a million people, was destroyed. On 25 April, Cyclone Kenneth made landfall in the northern province of Cabo Delgado, where insecurity made the response more complex. Cyclones Idai and Kenneth caused the death of more than 650 people and directly affected about 2 million people. About 715,000 hectares of crops were destroyed. The lack of clean drinking water resulted in a cholera outbreak, and there was major damage to infrastructure.

The United Nations revised the Humanitarian Response Plan three times: the first time in April after Cyclone Idai made landfall, the second in May after Cyclone Kenneth hit, and the third in August 2019 to reflect ongoing needs.⁶ After the first two months, the United Nations reported that the appeal was 38.4% funded. Total recovery needs were estimated to be US\$ 3.2 billion, approximately 21% of GDP.

Vanuatu

Tropical Cyclone Pam, a Category 5 cyclone, struck Vanuatu on the evening of 13 March 2015 while the President of Vanuatu was attending the international conference on disaster risk reduction (DRR) at Sendai. It caused widespread damage across all six provinces of the archipelago with winds around 250 km/h and gusts peaking at 320 km/h, as well as flash floods and storm surges; 69% of the population were affected and 65,000 people were displaced as houses were destroyed, alongside schools, medical facilities, and crops, compromising the livelihoods of at least 80% of Vanuatu's rural population. The death toll of 11 was low, given the size of the disaster, and this was attributed to investment in early warning and community preparedness measures (the International Federation of the Red Cross (IFRC), 2016). The affected population was spread over 22 islands; the remoteness and geographical spread of the

6 FTS records original requirements as US\$ 282 million for Cyclone Idai and US\$ 103 million for Cyclone Kenneth; these subsequently increased to US\$ 414 million for Idai and US\$ 113 million for Kenneth. See <https://fts.unocha.org/appeals/761/project-grouping/response-type>.

affected area, represented a logistical challenge and also incurred high costs.

The President issued Vanuatu's first ever appeal for international support and a state of emergency was officially declared, triggering a United Nations appeal of US\$ 29.9 million for three months. This was followed by a PDNA of US\$ 450 million, which estimated loss and damage to be 64% of GDP.

Nepal

On 25 April 2015, a 7.6 magnitude earthquake struck Barpak, about 76 kilometres northwest of Kathmandu. Nepal had not faced a natural shock of comparable magnitude for over 80 years. This was followed by more than 300 aftershocks, including one measuring 6.8 that struck 17 days later. Over eight million people were affected, almost one-third of the population, with over 8,790 casualties, 22,300 injuries, and 188,900 displaced people.

The earthquake caused landslides and major destruction to infrastructure: 755,000 houses were destroyed or damaged, causing people to live in temporary or transitional shelters for months—even during the monsoon and winter—and even years. Access to affected communities and the distribution of relief materials proved challenging because of the remoteness of many villages, rugged terrain, threat of landslides, and logistical difficulties. A United Nations appeal of US\$ 422 million was quickly launched, and the United Nations reported it being funded to 29% six weeks later. Damage was estimated to be US\$ 7 billion, equivalent to about one-third of GDP, half of which was for housing.

Indonesia

On 28 September 2018, a series of earthquakes struck Indonesia's Central Sulawesi province, the strongest a 7.4 magnitude earthquake only 10 kilometres deep with its epicentre close to the provincial capital, Palu. The earthquakes and resulting tsunami, liquefaction, and landslides affected 1.5 million people and caused significant damage and loss of life. They damaged or

destroyed more than 100,000 houses and caused approximately 4,000 fatalities and economic losses of US\$ 1.3 billion, or 13.7% of the region's GDP.

The Government of Indonesia took strong and visible leadership of the response and *welcomed* specific offers of international assistance in line with identified humanitarian needs through defined channels (Awan *et al.*, 2019).⁷ The Humanitarian Response Plan, requesting US\$ 50.5 million to provide assistance to 191,000 people, was funded at 26% after two months.

DRC

Ebola is endemic in DRC, which has had eight previous outbreaks, most recently in 2014 and 2017. Our crisis period includes two separate outbreaks of Ebola in DRC.

- DRC's ninth outbreak, centred in Mbandaka in the west of DRC, was declared on 08 May 2018. It resulted in 54 documented cases and 33 deaths. There were fears that the outbreak would reach Kinshasa, but thankfully this did not happen and it was brought under control quickly after a very swift response, and declared over on 24 July 2018.
- DRC's 10th outbreak, centred in Ituri and North Kivu in eastern DRC, was declared on 01 August 2018. This became the world's second largest Ebola outbreak on record, and was particularly challenging because it took place in an active conflict zone, with intense insecurity, political instability, displacement, and extremely high levels of community distrust leading to violence. It took nearly two years to bring it under control: it was declared over on 25 June 2020, with a total of 3,481 cases and 2,299 deaths. Millions of people were affected by this outbreak, with 303,000 people being vaccinated.

Both responses were led by the Government of DRC and supported by WHO and partners. As well as work in the DRC, preparedness capacities were built up in neighbouring countries to limit the risk of the outbreak expanding. There were six separate appeals for funding, totalling US\$ 725 million, making this the most expensive humanitarian appeal of our case studies.

⁷ Note that 'welcoming assistance' and 'requesting assistance' are important distinctions. At no point did the Government of Indonesia request international assistance, nor was it expected that they would do so. However, international pressure mounted in the days and weeks after the disaster, driven in large part by the role of the media and powerful (and painful) memories invoked by the word 'tsunami', as well as by the highly unusual event of a liquefaction (IFRC, 2019a).

Table 2: Summary of impacts of the crises, funding appeals, and funding supplied

Hazard	Country	Year	GDP/ cap in crisis year	Number of people affected*	Number of people affected/ population	Initial humanitarian appeal** US\$ million	PDNA US\$ million	Funding committed US\$ million	Loan share %	Max. funding disbursed*** US\$ million
Drought	Kenya	2017	1,572	3,000,000	6.0%	120	-	279	20%	278
Drought	Lesotho	2019	1,118	433,000	20.4%	34	-	14	0%	13.8
Floods/ landslides	Peru	2017	6,710	2,188,505	7.0%	40	-	105	67%	105
Cyclones Idai and Kenneth	Mozambique	2019	504	1,901,594	6.3%	386	3,200	906	13%	590
Cyclone Pam	Vanuatu	2015	2,801	188,000	69.3%	30	449	153	40%	66.3
Hurricane Matthew	Haiti	2016	1,266	2,100,439	19.4%	139	2,800	475	9%	330
Earthquake/ tsunami	Indonesia	2018	3,894	209,025	0.1%	51	-	2,322	97%	1,573
Earthquake	Nepal	2015	793	5,642,150	20.9%	422	7,000	1,209	48%	879
Ebola	DRC	2018-20	556	301,779	0.4%	725	-	1,376	35%	530

* These figures are taken from EM-DAT, the international disasters database (<https://www.emdat.be/>), and cross-referenced with humanitarian documents. The exception is for DRC: EM-DAT did not include a figure for the number of people affected, and assessing this is difficult. To include only those infected with Ebola does not provide a good indicator of the risk or impact of a disease, as many more people will have been affected by movement restrictions (impacting on livelihoods) and reduction in health services. We have chosen to use the number of people vaccinated, as this is one (imperfect) measure of people at risk.

** This is the initial United Nations humanitarian appeal, which often only covered needs for a few months and subsequent funds were requested via annual Humanitarian Response Plans; this therefore does not capture the total humanitarian costs. The exception is for DRC, where the figure given here is the sum of funding requested in the six Strategic Response Plans (SRPs) over the two-year period.

*** This assumes all humanitarian funding has been disbursed (a reasonable assumption) and that all bilateral development funding has been disbursed. This will not be the case, but we do not have disbursement data for this, so these figures are an overestimate.

● SIZE AND TYPES OF FLOW

Funding institutions

Across all nine crises, a total of US\$ 6,839 million was committed within the first 18 months. Although crises are usually synonymous with humanitarian response, this analysis shows the importance of development actors, which collectively contributed 74% of the total amount committed.

The World Bank was by far the biggest funder, providing 50% of total funds. Some of the World Bank funding is

very clearly related to a crisis and was developed in response to it, for example the Central Sulawesi Rehabilitation and Reconstruction Project in Indonesia, and the Earthquake Housing Reconstruction Project in Nepal. Other funding contributes to crisis response, recovery, or rehabilitation as one element of the project, for example the Regional Disease Surveillance Systems Enhancement Project (REDISSE) Phase IV in DRC and Additional Financing for the STEP project in DRC.

Table 3: Funding by type of institution

Institution/ funders	Number of projects	Loan committed US\$ million	Grant committed US\$ million	Total committed US\$ million	% of total committed	Total disbursed US\$ million
World Bank	32	2,413	1014	3,428	50%	1,628
Humanitarian donors⁸	1468	-	1,761	1,761	26%	1,761 ⁹
Regional banks	13	1,006	163	1,169	17%	519 ¹⁰
IMF	4	233	-	233	3.4%	233
Bilateral development donors	142	-	223	223	3.3%	n/a ¹¹
Insurance	2	-	25	25	0.4%	25
TOTAL		3,752	3,086	6,839		4,166

8 Humanitarian donors includes DAC members and other governments, pooled funds, United Nations agencies, NGOs and private corporations, foundations, and individuals. FTS was the primary data source, and due to the reporting process being voluntary, the comprehensiveness of funding figures varies across these institutions.

9 We do not have full disbursement data for humanitarian funding, so have to assume that all committed humanitarian funding is disbursed. This is a reasonable assumption, as humanitarian funding is usually spent very quickly.

10 Note that we do not have disbursement data for US\$ 88 million of regional bank projects, so this number could be up to US\$ 88 million higher.

11 We do not have any disbursement data for bilateral development funding, as the CRS database does not provide this.

Figure 1: Total funding committed by institution and modality



Comparing funding with need

It is very difficult to assess whether the amount of international funding was commensurate with needs, as there is currently no agreed way of accurately measuring needs. A wide range of contextual factors also influence costs, as has been described briefly in the introduction. It also bears repeating that international funding covers only a portion of total crisis costs.

- US\$ 30 million–US\$ 50 million for Lesotho, Peru, Indonesia, and Vanuatu;
- US\$ 100 million–US\$ 150 million for Kenya and Haiti;
- US\$ 380 million–US\$ 430 million for Mozambique and Nepal; and
- US\$ 725 million for DRC.¹²

Table 2 shows the **humanitarian funding** requested in the initial United Nations appeal. It should be noted that this does not reflect all humanitarian appeals (the IFRC, for example, will issue their own) and that, for some of these appeals, this only captures the needs for the first few months of the crisis—subsequent funds were requested via annual Humanitarian Response Plans. These appeals should therefore be viewed with caution and are only offered here to provide a broad sense of scale for humanitarian needs. As can be seen, these appeal amounts vary significantly:

There was huge variation in the amount of funding committed compared to the humanitarian appeal. While broadly speaking larger appeals received more funding, we found no other correlation between the funding provided and the number of people affected, the GDP *per capita*, or similar. Considering the United Nations appeal as an (imperfect) marker of needs, after six months, committed funding was less than the appeal level for Mozambique, Kenya, Peru and Lesotho (the latter fared worst, with only 10% of appeal met).¹³

12 This figure is the sum of the funding requested in the six SRPs as the epidemic worsened, and as needs increased over the two-year period: 9th outbreak: SRP, May–July 2018—US\$ 56 million; 10th outbreak: SRP-1, August–October 2018—US\$ 43.8 million; SRP-2, November 2018–January 2019—US\$ 61.3 million; SRP-3, February–July 2019—US\$ 148 million; SRP-4, July–December 2019—US\$ 288 million; SRP-4.1, January–June 2020—US\$ 128 million.

13 Haiti, Vanuatu, and Indonesia had received more funding than the United Nations appeal (with Haiti at 140%). Note this does not mean the United Nations appeal was fully funded, as some of this funding would have gone to other recipients, including directly to the government (e.g. insurance and IMF funds) and to NGOs; and the first appeal for Haiti was for three months only, with needs subsumed into the subsequent annual Humanitarian Response Plan.

In relation to **development funding**, it is even harder to estimate the financial costs of recovery and reconstruction. PDNAs are primarily conducted for rapid-onset disasters and are a commonly used tool to determine the physical damages, economic losses, and costs of meeting recovery needs after a natural disaster. They are requested and led by the government and supported by United Nations agencies, the World Bank, and the European Union. They are used by governments and the international development community as a base for recovery and reconstruction plans and programmes,

as well as to support discussions on grant and loan support from bilateral development donors, the World Bank, and others.

PDNAs were undertaken in four of our nine countries—Nepal, Mozambique, Vanuatu, and Haiti; loss and damage was valued at US\$ 7 billion, US\$ 3.2 billion, US\$ 2.8 billion, and US\$ 449 million respectively. While generous pledges were often made at PDNA conferences, after 18 months only 15% (on average) of these amounts had been committed.

Loans and grants

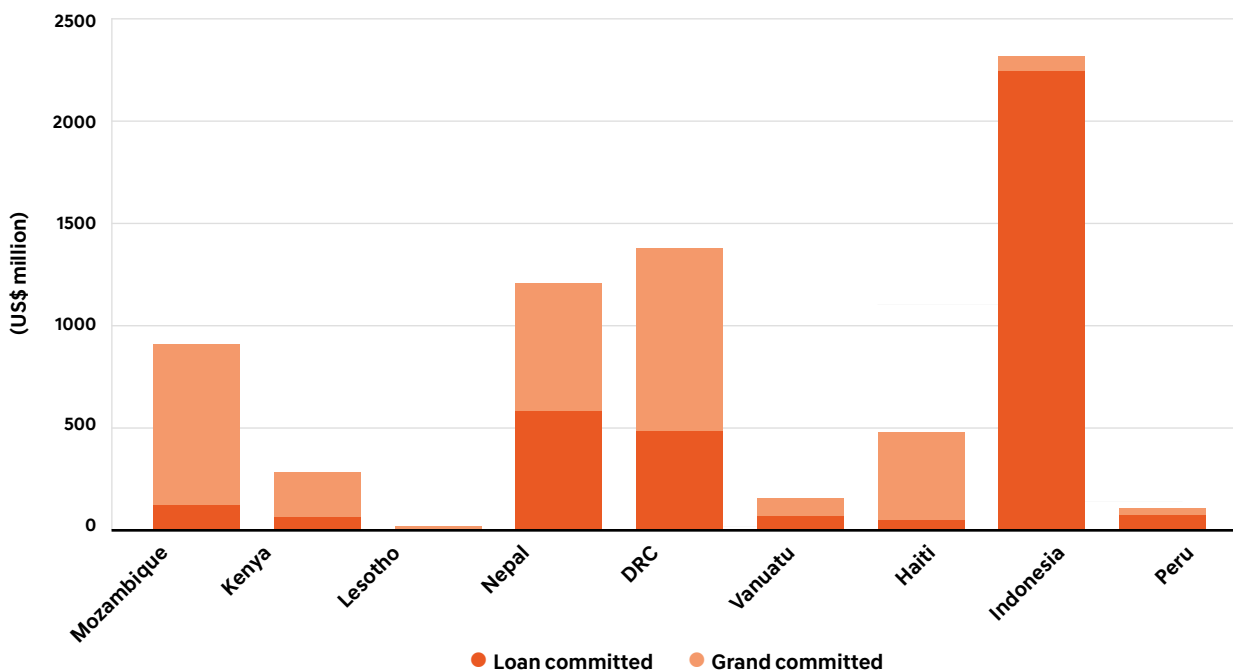
Just over half (53%) of total funding committed was in the form of loans. All IMF funding took the form of loans; 86% of regional bank funding were loans; and 70% of the World Bank’s funding were loans. All other funding (from insurers and humanitarian and development donors) consisted of 100% grant.

The share of total financing in the form of loans was generally smaller for poorer countries, but for our three countries with the lowest GDP *per capita* in the crisis year, loans still represented 13% in Mozambique, 35% in DRC, and 48% in Nepal. According to the IMF,

Mozambique was already in debt distress when the cyclones struck, and Vanuatu, Haiti, and DRC were at moderate risk of debt distress (Jubilee Debt Campaign, n.d.).

Most funding received in the first six months of the crisis—when first-phase emergency needs are highest, lives are at stake, and suffering and displacement are often most extreme—came from humanitarian sources and was therefore grant-based. The exception were the IMF crisis loans which were used to support balance of payments (Cat DDOs would also often be used at this stage, although not in our case study countries).

Figure 2: Total funding committed by country and modality



Most longer-term funding is in the form of loans. Once the first-phase emergency needs are over, countries must recover and rebuild economically, physically, and socially. As well as funding for rebuilding infrastructure and restoring livelihoods, this might require extra funding for education, nutrition, health, etc. for years post-crisis. This investment is required to prevent long-term negative consequences for national and individual development. Where sufficient grant funding is not available, governments may need to borrow to ensure this recovery and to prevent long-term costs. For poorer countries, the ability to finance response and recovery—and thus the

quality and speed of their response and recovery—is determined by, and limited to, their ability to borrow; this likely needs a rethink. For other countries with more ability to borrow, governments have to trade off the long-term risks of not investing in recovery with the long-term risks associated with taking on more debt.

The role of loans in crisis response and recovery is worth further exploration and consideration (Box 2). There is surprisingly little written on this subject in the crisis financing literature.

Box 2: Disasters and debt

While grant funding covers some recovery and reconstruction costs, this is only a very small proportion of what is needed. The government must therefore take loans if it can, and this requires balancing the economic benefits from reconstruction and recovery with the costs of debt—including the fact that the more it borrows, the less flexibility it has to manage the costs of future crises, whether economic or natural. The inflow of funds also risks placing upward pressure on the local currency, and reconstruction activity could exacerbate inflationary pressure (Dornan and Newton Cain, 2015).

There are some indications that the medium-term and long-run economic impact of a disaster is influenced by a country's ability to mobilise significant funding for reconstruction. Given poorer countries are less able to mobilise funds, they are likely to suffer more in the medium and long term as a result of disasters.

Disasters related to natural hazards and epidemics are likely to increase low-income country debt levels. In some cases this can be dramatic. For example, debt levels rose by an average of 22% of GDP in Liberia and Sierra Leone following the West African Ebola virus epidemic (Griffiths, 2020).

One solution is debt restructuring—either forgiveness (where debt is reduced, eliminated, or taken on by another entity), rescheduling (e.g. reducing the interest rate or extending the maturity), or debt conversions or swaps (where the debt is exchanged for something of equal value). Restructuring is a common feature of sovereign debt markets and the focus should be on how to do this better with more advanced planning, rather than expecting to avoid restructuring (Griffiths, 2020).

Pausing debt repayments if a borrower is hit by a disaster relating to natural hazards would allow the country to increase their fiscal space to respond to the shock, giving countercyclical opportunities to boost expenditure. However, there have as yet been limited examples of implementation beyond 'hurricane or natural disaster clauses' in new debt instruments for the Caribbean (IMF, 2020a; Waithe, 2019).

The IMF and the Paris Club have restructuring mechanisms, but (pre-COVID-19) they only applied to very extreme disasters and have been used only a handful of times.¹⁴ The debt crisis created by COVID-19 is creating the space for a rethink (IMF, 2020b), and this could also be usefully applied to disasters from natural hazards (Parker, 2020).

¹⁴ <https://clubdeparis.org/en/communications/page/exceptional-treatments-in-case-of-crisis>; www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/49/Catastrophe-Containment-and-Relief-Trust.

● PRE-ARRANGED AND FLEXIBLE FINANCE

How much financing was formally pre-arranged?

The Centre for Disaster Protection defines pre-arranged finance as funding that has been agreed in advance to be triggered if a certain set of circumstances should arise, e.g. if winds of a certain level are reached or if a vegetation index drops below a certain level. This is different from funding that has been set aside generally for crisis

response, but with no specific planning regarding how much will be allocated, where it will go, or under what circumstances.¹⁵ Examples of pre-arranged finance include insurance and risk pooling, contingent credit, contingent grants, and FbF. The advantages of such funding are given in Box 3.

Box 3: The advantages of pre-arranged funding

Pre-arranging finance has many advantages.

- **Speed:** Funding can be triggered within hours of a crisis occurring. Sovereign insurance for cyclones guarantees pay-out in under 14 days; Cat DDOs disburse in a week. This is considerably faster than almost all other funding sources. This fast response has real benefits in reducing human suffering in crises; one study on floods in Bangladesh found that receiving cash assistance one day earlier resulted in a small increase in welfare (Pople *et al.*, 2021a).
- **Reduced response costs:** Early action is significantly cheaper than late humanitarian response. This is already much evidence that this is the case for drought (e.g. Cabot Venton, 2016; 2018) and epidemics (e.g. Kellerborg *et al.*, 2020), and new research suggests the same for other hazards (e.g. World Food Programme (WFP), 2019). Where financial flows are triggered based on a forecast (i.e. before a crisis has occurred), they can fund anticipatory interventions to mitigate the impact of that crisis. This could be to support livestock health and increase water sources in a drought, or to provide cash or materials to families to protect their homes if flooding or a cyclone is imminent. This prevents the spiralling needs and costs that arise from slow response. For example, in 2020, the United Nations' CERF released funds for anticipatory action for floods in Bangladesh two weeks before peak flooding; it was able to support more people at half the cost than in 2017 and 2019, when funds were provided three to four weeks after peak flooding (Pople *et al.*, 2021b).
- **Stronger planning and therefore a more effective response:** If implementing agencies and ministries know what money will come and when, they can put systems in place in advance to ensure it will be used well. For example, to purchase drought insurance from the African Risk Capacity (ARC), a government has to have a response plan in place that details how a pay-out will be used quickly to benefit affected people. An evaluation of the 2019 Senegal pay-out has found that ARC's engagement with Senegal has contributed to strengthening the government's capacity for early warning and planning, while the ARC Replica initiative has improved coordination in the planning and delivery of assistance among major NGOs, and between the government and NGOs collectively (Oxford Policy Management (OPM), forthcoming). With the assurance that finance will arrive, responding agencies can develop contingency plans for different scenarios and sophisticated plans for delivery, preselecting contractors, drafting memoranda of understanding, and considering how key elements (such as governance, logistics, essential services, communications, procurement, and electronic finance) might work in a crisis. Developing such a plan in advance supports public engagement, transparency, and accountability, as well as a fast response.

¹⁵ For example, the United Kingdom announced an Overseas Development Administration crisis reserve fund of £500 million in the 2015 United Kingdom aid strategy, consisting of a £200 million cash reserve (held centrally by DFID) and a £300 million redeployable reserve (allocated programme funds that could be redirected to respond to a crisis if needed). This allowed, for example, DFID to quickly commit over £22 million of United Kingdom aid in response to Cyclone Idai: <https://icai.independent.gov.uk/wp-content/uploads/Management-of-the-0.7-ODA-spending-target.pdf>. As of April 2021, the United Kingdom has a £30 million crisis reserve to respond rapidly to new crises: www.gov.uk/government/speeches/uk-official-development-assistance-oda-allocations-2021-to-2022-written-ministerial-statement.

Very little evidence of pre-arranged funding could be found for our case studies. This means that, when the crises hit, most governments and responding agencies did not know what funding they could rely on and had to scramble to access funds. Only four countries had pre-arranged funding, amounting to only 2.3% of total funding. This comprised of the World Bank's Cat DDO in Peru (US\$ 70 million), Pandemic Emergency Financing Facility (PEF) pay-outs in response to the Ebola outbreaks in DRC (a total of US\$ 61.4 million), and insurance pay-outs from the Caribbean Catastrophe Risk Insurance Facility (CCRIF) to Haiti and the Pacific Catastrophe Risk Insurance Company (PCRIC) to Vanuatu (US\$ 20.4 million and US\$ 1.9 million respectively).

The insurance pay-outs were fast, paying out in under 14 days, and the Cat DDO paid out within a week of activation.¹⁶ For the PEF, the first activation was 22 May 2018 (14 days after the declaration of Ebola), and the first pay-out was agreed on 01 June, disbursed to WHO (US\$ 6.86 million) on 07 June and to UNICEF (US\$ 4.54 million) on 18 June, following a delay due to a disparity in institutional agency fees (World Bank, 2019a).

Our case study countries also included two FbF pilot projects. This funding was committed a couple of years before the crises.

- In Mozambique, finance was triggered by a predefined value of forecast wind speed. Prior to the cyclone making landfall, staff of the Mozambique FbF project and volunteers from the Mozambique Red Cross disseminated warnings and reached out to vulnerable populations, even in remote areas; supplies were pre-positioned; and, in the provinces of Sofala and Zambezia, which were forecast to be hit hardest, support was provided to strengthen houses (IFRC, 2019b). The financial amount appears to have been US\$ 515,000.
- In Peru, predictions of a major global El Niño event began in mid-2015. The Peruvian government ramped up its response in September, and the FbF pilot also scaled up in response to this forecast, providing special kits to strengthen houses before the El Niño rains were due. However, the 2015/16 El Niño rains were much smaller than forecast and by late 2016 this intervention was likely considered to have been a false alarm or 'acting in vain.' However, these strengthened houses did much better when unforecast heavy rains came in early 2017 (Venkateswaran *et al.*, 2017). An

evaluation found that the 2016 FbF intervention reduced house damage in 2017 by around 63% (Aguirre *et al.*, 2019). Funding for FbF in Peru was US\$ 1.2 million in 2015, although it is not clear how much of this was used in the El Niño response.

Flexible financing

While very little funding was pre-arranged, we found evidence of flexible funding arrangements and actions that were crucial to support the first stages of emergency response. As not all crises are predictable, this fast and flexible funding is a necessary and complementary element of a good package of crisis financing. This flexible financing includes the following.

- Dedicated rapid response or contingency funds: The two key examples of this are the United Nations CERF and the WHO CFE. These were both very fast and very flexible, playing a crucial role in kickstarting the emergency response. The amount of funding was US\$ 192 million, which may form a small part (2.8%) of total funding but represents a key part of first-phase emergency funding, at 11% of humanitarian funding. Other rapid response funds include the Start Network, but this fund is very small: in our sample, only Peru and DRC were allocated funding, amounting to around US\$ 1.5 million.¹⁷
- Flexible long-term programmes designed to allow funding to be pivoted to an emergency from existing funds including mechanisms such as crisis modifiers and World Bank CERCs. These systems can be unwieldy and often take months to disburse, rather than weeks. CERCs can provide substantial sums of funding, unlike other mechanisms that are much smaller in scale.

The United Nations CERF

CERF was established in 2005; it provides rapid and flexible funding to United Nations agencies to kickstart relief efforts immediately through a coordinated and prioritised response. CERF's annual funding target is US\$ 1 billion, although contributions in the last three years have averaged at US\$ 670 million. The top five donors are the United Kingdom, Sweden, the Netherlands, Norway, and Germany.¹⁸ CERF has two funding windows—underfunded emergencies and rapid response—and is currently developing a formalised approach to finance anticipatory humanitarian action.

16 Interestingly, the Cat DDO was activated nearly a year after the floods peaked, to pay for reconstruction rather than response: <http://documents1.worldbank.org/curated/en/854931551731000914/pdf/icr00004497-02282019-636872473730628419.pdf>.

17 Applications to the Start Fund for Kenya and Haiti, and a later one for DRC, were rejected.

18 For 2006 to 2021, see <https://cerf.un.org/>.

Amount: CERF paid out to all of our case studies, with an average of US\$ 12.6 million per crisis, representing 1.55% of all funding committed and 5.7% of humanitarian funding. This represented a significant proportion of humanitarian funding to Lesotho, Indonesia, and Peru, amounting to 22%, 20%, and 15% of humanitarian funding respectively.

Timing: CERF makes decisions quickly. Often as soon as the crisis has hit, CERF allocates an envelope of funding to that crisis—for example, US\$ 14.4 million was allocated from CERF one day after the Government of Indonesia announced that it would accept offers of international assistance; US\$ 2 million was allocated for urgent activities within 48 hours of the confirmation of the ninth Ebola outbreak in DRC.

CERF is also extremely quick to disburse. In 2019, across all CERF projects, the average length between submitting a funding application and disbursement was 12.1 working days. However, for funding for Cyclone Idai in Mozambique, CERF applied emergency fast-track procedures so that all projects apart from one were approved either the next day or two days after the initial submission of the application, while funding was disbursed on average 4.2 working days from the initial submission (OCHA, 2020).¹⁹

However, agencies do not have to wait for CERF funds to arrive in their accounts before responding; they can start to charge expenditures for response activities straight after the onset of the emergency. This allows agencies to start response activities earlier, using internal reserves in the knowledge that CERF funds will be forthcoming. The Vanuatu United Nations Resident Coordinator highlighted that one of the most important aspects of CERF was that its funding was retroactively made available from the time the disaster occurred, which enabled, for example, UNICEF to respond quickly without having to worry about sources of funding (Lubrani, 2015). Similarly, in Kenya, the United Nations Resident Coordinator noted that CERF funding was critical in jump-starting emergency response (OCHA, 2019b).

The WHO CFE

The CFE was set up by WHO after the West Africa Ebola outbreak and it can release funds within 24 hours of an emergency request. It was established to fulfil two primary functions: to ensure that WHO and key partners are able to quickly access funds to mount a rapid response

to a newly emerging health emergency before funds from other mechanisms can be released, and to ensure that the response to an ongoing emergency can be sustained or expanded in the face of funding gaps. Total contributions in the last three years have averaged at US\$ 38 million. The top five donors to the CFE 2015–20 were Germany, Japan, the United Kingdom, the Netherlands, and Sweden.

The CFE contributed to the DRC Ebola outbreak in both of these functions. Within four hours of the declaration of the ninth Ebola outbreak, the CFE released US\$ 1 million to scale up operations and mobilise health partners to support the national response. It released a further US\$ 1 million three days into the crisis. In all, the CFE contributed just over US\$ 6 million to the 11-week response.

For the 10th outbreak, WHO used the CFE to disburse rapid bridge financing to set up a new Incident Management Structure within 48 hours of the confirmation of the first cases. In total, the CFE provided US\$ 67.5 million released in 10 tranches throughout 2019 (of this, US\$ 26.2 million was refunded to the CFE by donors) (WHO, 2020).

The CFE also provided US\$ 4.6 million to support essential life-saving operations for cyclone-affected communities in Mozambique. A total of 80 WHO staff and consultants were rapidly deployed to affected areas, with the majority of funds used to procure essential medical supplies, ensure access to primary healthcare, and establish infectious disease surveillance and rapid response capacity, including emergency cholera vaccination campaigns in response to both Cyclone Idai and Cyclone Kenneth.

The World Bank CERC

A CERC is a component within a project that allows funds to be quickly allocated to emergency recovery activities in the event of a disaster, avoiding time-consuming project restructuring. A CERC represents bridge financing for immediate emergency recovery needs while other more medium-term support is made available. As such, it focuses on activities that help minimise emergency impacts on affected communities (e.g. cash transfers; temporarily reconnecting roads; repairs to water systems and schools), and does not include medium-term institutional development, capacity building, or complex infrastructure reconstruction (World Bank, 2019c).

¹⁹ There were 16 projects, totalling US\$ 14 million.

CERCs tend to be ‘zero-dollar’ components, which means that the budget line is set up in the project but is empty, and funding is moved from existing project components to the CERC. (The project might subsequently require additional financing to be arranged to ensure enough funding is available to meet the programme’s objectives). The Immediate Response Mechanism (IRM) can be used to augment project resources by allowing up to 5% of an undisbursed IDA portfolio in an affected country to be channelled through any CERC.

CERCs played an important role in our case study countries. For example, in DRC, the World Bank made an additional US\$ 80 million available via a CERC in May 2018. Although these funds were not used for the ninth Ebola outbreak response, they were effectively pre-positioned to contribute to the 10th outbreak. US\$ 19.6 million was allocated to the first SRP in August (US\$ 6.5 million to WHO; US\$ 3.7 million to UNICEF) and US\$ 42.2 million to the second SRP in December (US\$ 17.2 million to WHO; US\$ 12.8 million to UNICEF). US\$ 20 million of CERC money was made available for the third SRP in early February. Later in February, additional financing was approved as replenishment (World Bank, 2019a).

In Mozambique, the government requested the World Bank to activate US\$ 55 million from the IRM through CERCs in three projects. This financing was to be used for emergency rehabilitation in road infrastructure, water supply infrastructure, and rural livelihoods. This work was mostly undertaking the same work as originally planned in the projects but in different locations, to incorporate Cyclone Idai-affected areas and to expand some activities beyond what was originally planned to undertake relief work (World Bank, 2019c).

Amount: CERCs are typically tens of millions of dollars, representing a major financial contribution to a crisis.

Timing: CERCs offer a very useful mechanism for pivoting funding to a crisis. More work is required to see how quickly the disbursements have been made in practice, as this information is hard to find. For zero-dollar CERCs, it seems that there is little to no planning regarding what might happen when a crisis hits; they are thus likely to take some time to activate and begin implementation. CERCs are now being systematically included in the health portfolio, with plans to streamline CERC implementation for health emergencies—for example, adapting the CERC triggers and positives list for greater sensitivity to health emergencies (World Bank, 2019a). This is very positive, and increased planning like this offers real advantages for all CERCs.

Flexible long-term programmes

Some long-term programmes are designed to respond to changing circumstances, or can scale up or pivot in response to a crisis. A fully shock-responsive programme that is specifically designed to respond early and/or fast to crises will contain a number of key elements. It will:

- have a flexible and adaptive approach to programming, such that risks of shocks are brought into the core of the programme via the theory of change, logframe, or other programme planning document—this specifically allows pivoting of focus and resources;
- have a clearly defined and rapid process for decision making concerning scale-up/pivot;
- require contingency planning and Standard Operating Procedures for scale-up/pivot to be developed and updated regularly;
- include defined and specific indicators and thresholds for scale-up/pivot; and
- include finance to support the shift—e.g. a crisis modifier, contingency specifically for shock-response, or links to specific external funds.

The more of these elements a programme has, the more likely it is to be able to respond swiftly and effectively to a crisis. Even where funding is available, the ability to programme it effectively can be a constraint, so a purposefully designed integrated programming and financing system is ideal.

It is likely that some programmes in our countries did include such flexible elements. As described earlier, it is not possible to use international funding databases to identify these kinds of mechanisms, but the comprehensive Active Learning Network for Accountability and Performance (ALNAP) study (Obrecht, 2019) has found several very important examples of programmes from Kenya that were specifically designed to be shock-responsive.

- UNICEF’s Integrated Management of Acute Malnutrition Surge, an early-action system in the nutrition sector, was activated across seven counties in August 2016 and funds were released to county health services as early as September (this was the first use of the surge model).
- Emergency payments for the HSNP were triggered during the failed short rains in October and November 2016. The first payments were made on 23 December 2016, but did not go out to all households on the emergency register. HSNP is funded by the UK Government, but it is expected to be increasingly paid for by the Government of Kenya over the next decade.

In some cases, funding was pivoted/repurposed to respond to the worsening drought.

- Drawing on internal monitoring and IPC assessments, the Food and Agriculture Organization (FAO) began requesting internal funds for early mitigation and prevention programming, primarily to provide animal feed, livestock health interventions, and borehole repair. This internal funding was released in September 2016, and soon after the Directorate-General for International Cooperation and Development at the European Commission permitted the FAO to redirect €500,000 from a long-term development programme towards drought-related early action and response.
- The European Civil Protection and Humanitarian Aid Operations (ECHO) also permitted its partners to

redirect funding from resilience programmes towards drought response using emergency cash transfers, beginning in November 2016.

- Some international NGOs (INGOs) reported being able to secure small amounts (approximately €20,000) in contingency funding in August 2016, including Action contre la Faim, which was able to shift ECHO funding to early response in November 2016.

Amount and timing: as can be seen from the (limited) examples above, funding levels are likely to be low, up to and around US\$ 1 million. For programmes which have a limited number of shock-responsive elements (as described above), their ability to react quickly may be limited (Peters and Pichon, 2017; Lung, 2020).

Box 4: Use of internal funds and flexible arrangements to support immediate scale-up

Some agencies have their own internal contingency funds or rolling emergency funds that are used to respond very quickly to ensure a swift scale-up. The expectation is that these will be refunded by donors in due course. Such funds are often used to support the prepositioning of supplies (such as food, water, blankets, tarpaulins, etc.) and staff in the areas expected to be affected before the crisis hits, particularly in situations such as cyclones, for which there are typically a few days' warning.

For example, in Haiti, various partners working in Cyclone Matthew-affected areas (including UNICEF, Médecins du Monde, ACTED, CARE, the FAO, and the International Organization for Migration (IOM)) pre-positioned staff, resources, and relief items, using ongoing programmes (such as the UK Department for International Development (DFID)-funded Resilience programme, and the water, sanitation, and hygiene (WASH)/health cholera response). The WFP pre-positioned food stocks thanks to funding from Canada; IOM and Catholic Relief Services received approximately US\$ 200,000 from the United States Agency for International Development (USAID) for

immediate response activities (Grünwald and Schenkenberg, 2017). In Mozambique, the IFRC released US\$ 344,000 in cash from its Disaster Relief Emergency Fund at almost the exact moment Cyclone Idai was making landfall (Climate Centre, 2019).

The value of this is usually not costed and may be very small scale financially, but can be crucial to facilitate a very swift scale-up and response. In Mozambique, it is estimated that pre-positioned contingency stocks were valued at more than US\$ 6 million, funded by donors through United Nations agencies and INGO consortia (Baker *et al.*, 2020).

The 'no regrets' approach taken in Mozambique by larger United Nations agencies, INGOs and the IFRC, often using their own funds, enabled the response to get off to a relatively quick start. While they recouped some of the funds they advanced, including from CERF, the agencies that advanced the largest amounts struggled to recoup their commitments from donors. This could potentially impact the willingness of agencies to adopt a similar 'no regrets' approach in future (Baker *et al.*, 2020).

CHAPTER 6

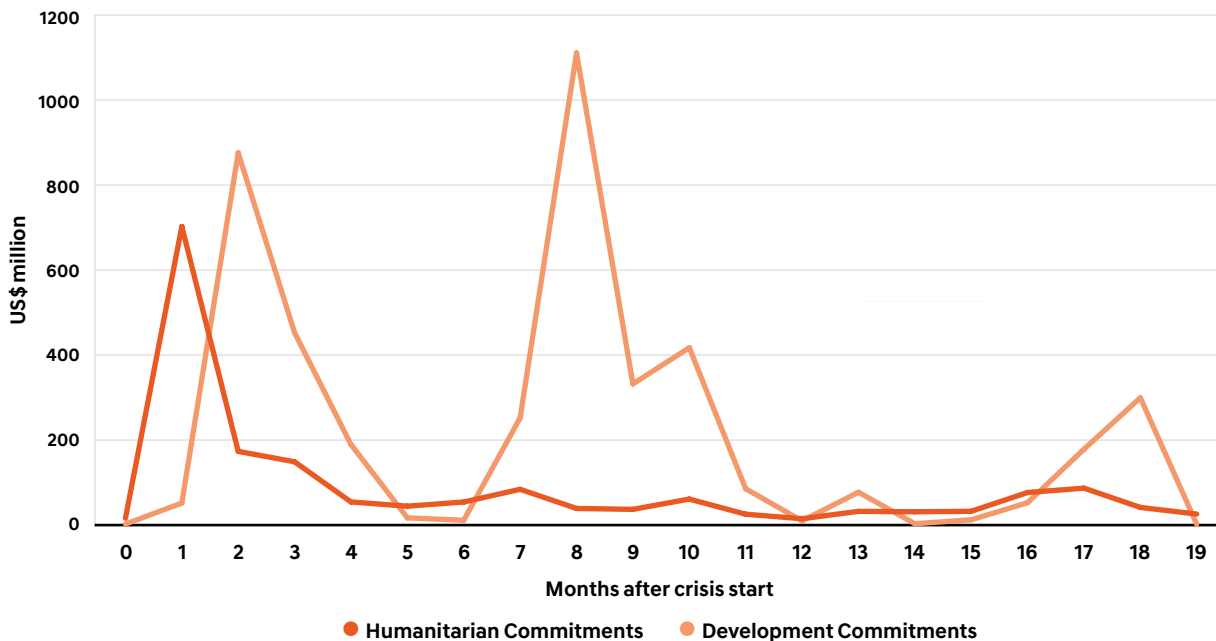
● ONCE THE CRISIS HIT, WAS THE FUNDING TIMELY?

A total of US\$ 6.839 billion was committed to all countries over the 18-month period. Of this, only 27% was committed in the first two months; 41% was committed by six months; and 77% was committed by 12 months.

Of course this refers to commitments, as disbursement of that funding would have taken much longer. Up to 55% was disbursed after the first 12 months—which means that funding was disbursed more slowly in these crises than in response to COVID-19 (which was 64% disbursed after one year: Yang *et al.*, 2021), with 64% having been disbursed after 18 months.²⁰ Part of the difference is due to reconstruction funding, much of which is spent after 12 months.

Figure 3 shows the timeline of humanitarian and development commitments. While the humanitarian funding is broadly as one would expect, with a major peak at the beginning, the development funding has an interesting early peak at two to three months, followed by the more expected peak around eight months. This early development peak is very encouraging as it indicates a stronger response from development actors to crises. It is made up of IMF loans and regional bank and World Bank commitments. However, it should be noted that, while IMF loans will have been disbursed in the first few months, to support government action in a range of ways, the funding from banks was not disbursed until many months later.

Figure 3: Timeline of humanitarian and development funding commitments



²⁰ The figure of 64% is calculated out of the total funds for which we could track disbursement; this does not include bilateral development funding and some regional bank funding.

This graph should be taken with some caution: there are a relatively small number of data points on the development side and there is a risk that this curve has been skewed by the choice of sample countries. Nonetheless, it is intriguing and is offered here as a prompt for further exploration. More research is needed to determine whether this pattern holds true for a wider set of countries and crises. More exploration and discussion would be helpful around the optimum speed of funding commitments and the choice of funding modalities and sources, which would be influenced by the particularities of the disaster and how the crisis unfolds over time.

As expected, the **pre-agreed funding that was in the form of budget support** paid out fastest: sovereign insurance paid out less than two weeks after the cyclones made landfall, and the Cat DDO in Peru paid out seven days after it was activated. The PEF took a little longer—

its first disbursement occurred 49 days after the first Ebola case confirmation.

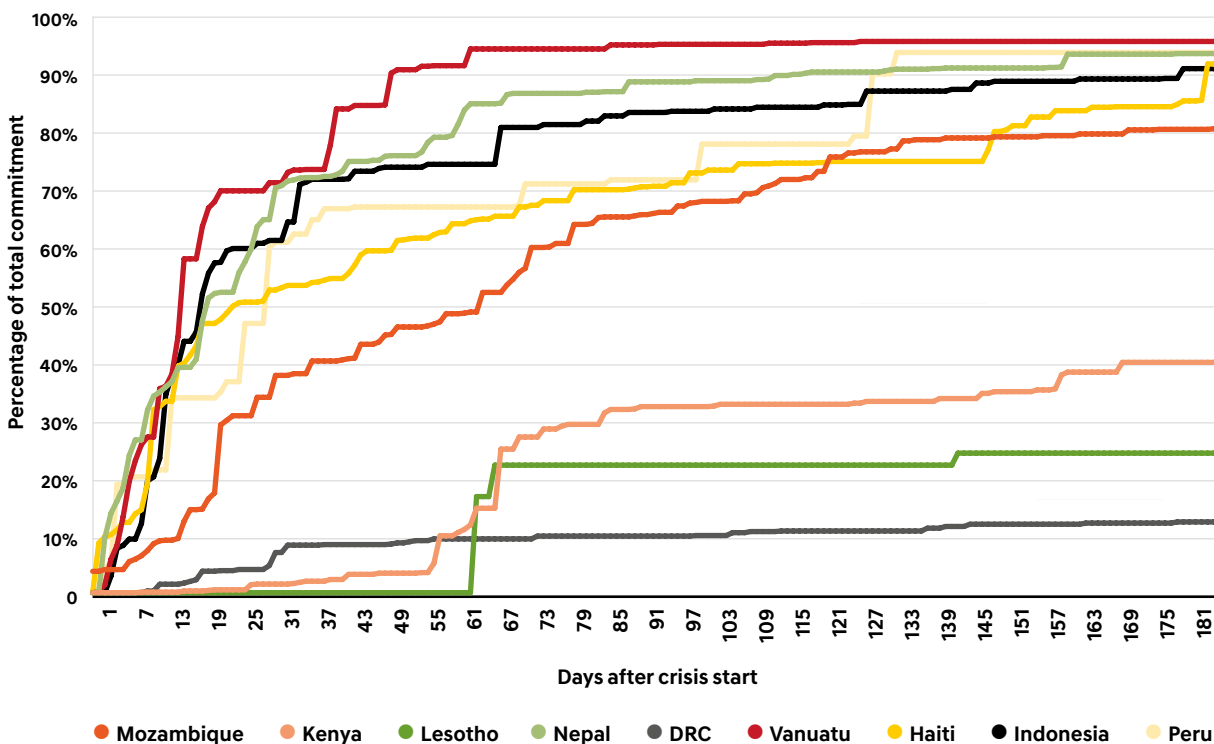
The **IMF** was also fast, disbursing four loans swiftly. They were mostly provided under the Rapid Credit Facility. Loans to Mozambique and Haiti were disbursed within two months, Nepal and Vanuatu within four months.

Humanitarian funding paid out relatively quickly, with considerable funding arriving in the first few months when needs were high and plans urgently needed to be put in place, and (for all crises bar DRC) with the vast majority of funding being provided within six months (Table 4). Note this assumes that disbursement happened as soon as the funds were committed, which—although likely (see the methodology section)—may not always have been the case. However, the speed of this funding was highly dependent on the type of hazard.

Table 4: Speed of humanitarian funding

Humanitarian funding committed	Up to 2 months	2-6 months	6-12 months	12-18 months
All crises	44%	58%	70%	85%
Crises excluding DRC	60%	80%	95%	97%

Figure 4: Humanitarian funding committed in the first six months



The speed of **humanitarian funding for rapid-onset crises**, which have a strong ‘CNN effect’,²¹ was positive.

- Two months after the crisis began, Vanuatu had 94% of its humanitarian funding committed, Nepal had 84%, Indonesia 74%, Haiti 64%, and Mozambique 49%. In some cases, funding was incredibly fast: US\$ 148 million, plus lots of in-kind support, was committed to the Nepal crisis in just the first week.
- After six months, more than 90% of humanitarian funding for rapid-onset crises had been committed, apart from Mozambique, which was somewhat behind with 81%.

Funding for drought situations was by far the slowest.

These crises actually began significantly before the government declaration of emergency or appeal, with poor rains foretelling poor harvests and human suffering. Drought is a slow-onset crisis, with crisis impacts that can be predicted months in advance on the basis of past failed rains and future forecasts. Paradoxically, however, funding is slower to arrive. While forecasts are not perfect, their accuracy is improving, and thus it might be expected that substantial funding could be made available early to support early action to mitigate the drought’s impacts, and that funding should be swiftly delivered if an appeal occurs, because institutions will have expected the call for assistance. However, neither of these situations occurred.

- **Limited early action:** As described in the section above on ‘flexible long-term programmes’, some funding was made available to respond to the drought in Kenya. This represents real progress in terms of flexible programming and reflects the focus on resilience and shock-responsive programming by government and others, but the funding remained extremely small in relation to needs. In Lesotho, CERF provided US\$ 5.5 million of funding in January 2019 after one set of failed rains (this actually occurred before our analysis period), but subsequent concerted advocacy from the United Nations Resident Coordinator and team after the next failure of the rains was to no avail and an emergency was declared several months later.
- **Prompt response to appeals:** Funding did not arrive swiftly when the governments declared an emergency. After two months, funding committed for Kenya and Lesotho was 11% and 1% respectively, and at six months these figures were still only 41% and 25% respectively. For Lesotho, almost all of this was from CERF.

Even the drought appeals were not very timely. For rapid-onset crises, it took an average of eight days after the disaster to launch a United Nations appeal, but for drought it took 33 and 50 days respectively from the time that the government declared an emergency to launching the Kenya and Lesotho appeals.

It is clear that there are real barriers to swift response to drought. International humanitarian actors that attempted to generate early-action funds in Kenya reported that donors were reluctant to release funds before an emergency declaration, seeing it as the government’s responsibility to respond, and some development actors saw crisis prevention as primarily an area of humanitarian expertise and responsibility. This contributed to a situation in which too little preventive action (from development actors) was undertaken too late (from humanitarians) to fully protect households from the impacts of drought (Obrecht, 2019). Pre-agreeing triggers for response to drought and pre-agreeing an integrated technical response across the humanitarian and development spectrum is crucial to begin side-stepping political calculations and address these barriers.

Funding for Ebola: DRC was something of an outlier in our sample, in a unique situation where humanitarian needs grew over nearly two years in ways that could not have been foreseen at the start. The 10th Ebola outbreak occurred in a conflict zone and was far more difficult to bring under control than expected; the complexities of the response increased significantly. As such, there were six separate appeals—one for the ninth outbreak, and five for the 10th outbreak. This means that substantial humanitarian funding was requested and provided 12 months or even 18 months into the outbreak, which has skewed the funding picture in Table 4.

Funding for this outbreak was provided swiftly. It seems the world has learned the lessons from the West Africa Ebola outbreak and the first three appeals, at least, were swiftly fully funded. As described earlier, the World Bank provided US\$ 80 million through a CERC; further, on the day the ninth outbreak was declared, it reallocated US\$ 15 million from an existing Health System Strengthening for Better Maternal and Child Health Results Project. The 10th outbreak also benefited from unspent funds from the ninth, as well as from the West Africa outbreak.

Table 5 lists the 10 largest **humanitarian donors** to all our crises, as well as the speed of their funding. Most

21 This refers to videos and images broadcast immediately after or during disasters, causing an outpouring of public sympathy and resulting in major financial donations from governments and individuals alike.

humanitarian donors had provided the vast majority of their funding by six months—with exceptions for Ebola in DRC and for drought in Kenya.

The United States provided the largest volume of funding overall and also in the first two months post-crisis (US\$ 197 million), yet this remained a relatively small proportion of the total funding they went on to provide over the 18 months following the crisis (at 31%). It should be noted that the United States was the biggest donor to the Ebola outbreak in DRC, and that almost all the US\$

188 million they provided in the 12-month to 18-month period was for DRC, a period which represented a huge scale-up in the Ebola response.

The slowest donor to commit funds on average over the nine crises was ECHO (26% committed within the first two months of the crises and 58% at six months). Like all donors, there was wide variation in the proportion committed across the crises. Indonesia received 100% of its committed funding from ECHO in these first two months, whereas Haiti received just 11% and Lesotho received 0%.

Table 5: 10 largest humanitarian donors, by funding period

	Cumulative funding committed US\$ million (months)				Cumulative funding committed % of total (months)			
	2	6	12	18	2	6	12	18
United States	197	288	432	626	31%	46%	69%	100%
United Kingdom	71	99	126	134	53%	74%	94%	100%
ECHO	32	69	93	120	26%	58%	78%	100%
CERF	71	98	99	114	62%	86%	87%	100%
Private (individuals and organisations)*	60	61	65	65	91%	94%	100%	100%
Japan	32	38	40	46	69%	82%	88%	100%
Norway	34	40	43	45	77%	90%	96%	100%
China	23	44	44	44	51%	100%	100%	100%
Canada	35	38	40	42	82%	90%	94%	100%
Sweden	27	35	37	37	71%	94%	99%	100%

* Note that 'Private (individuals and organisations)' is somewhat of a catch-all category, introduced by FTS to make it easier for reporting organisations. Some private organisations and foundations report separately under their own name.

Considering the speed of **development funding** commitments, the World Bank was slower than others, with only 65% of funding committed after 12 months, compared to 94% for both regional banks and bilateral development donors. We see this pattern in the number of projects approved as well: the World Bank approved a few projects in the first few months, but the majority of its projects were approved between months 7 and 13 after the crisis, approving the most projects per month (six) in month nine. For the regional banks, their approval was skewed much more towards the first few months, but it should be noted that the dataset was small here.

In terms of speed of disbursement, we have been unable to compare between major development funders because disbursement data are highly incomplete for regional banks and bilateral development donors. For the World Bank, we know that 2% had been disbursed after six months, 36% at 12 months, and 44% at 18 months. There are some indications that the World Bank disburses faster than regional banks, but more data are needed on this. By way of example, in Mozambique:

- the World Bank has six different projects²² totalling 410 million, of which US\$ 139 million (34%) had been disbursed after 18 months; and
- the AfDB had one main project of US\$ 44 million,²³ which was agreed quicker than most of the World Bank projects (commitment was 83 days post-crisis), but only US\$ 0.35 million (0.8%) had been disbursed after 18 months.

The picture is similar in Nepal, where:

- the World Bank approved three loans totalling US\$ 328 million within 18 months of the earthquake; of this, US\$ 183 million (56%) was disbursed within 18 months; and
- the ADB approved the US\$ 203.8 million Earthquake Emergency Assistance Project just two months after the earthquake: after 18 months, only US\$ 18.4 million (9%) had been disbursed.

There is one instance of fast disbursement by a regional bank: the ADB committed to a loan of US\$ 500 million for Indonesia (Emergency Assistance for Recovery and Rehabilitation from Recent Disasters)²⁴ less than two months after the earthquake, all of which was disbursed within a month.

Some of the slowness of development funding is attributable to reconstruction projects, which naturally occur later in the crisis timeline and which may require detailed technical specifications, as well as to government capacity to absorb the funding. However, not all projects fit this profile, and considering that the World Bank is the largest funder, there is a need to consider speed of commitment and disbursement and to explore whether there is scope for improvement. It is worth noting that other financial analyses (e.g. Spearing, 2019) have queried the World Bank's speed of response.

22 Mozambique Additional Financing—Water Services and Institutional Support II; Mozambique: Cyclone Idai and Kenneth Emergency Recovery and Resilience Project; Additional Financing for Integrated Feeder Road Development Project; Additional Financing to the Agriculture and Natural Resources Landscape Management Project (SUSTENTA); Second Additional Financing for the Social Protection Project and Support to Cyclone and Flood Emergencies.

23 Available at [www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Multinational - Programme post cyclone Idai and Kenneth emergency recovery and resilience programme for Mozambique Malawi and Zimbabwe %E2%80%93 PCIREP - Appraisal report.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Multinational_-_Programme_post_cyclone_Idai_and_Kenneth_emergency_recovery_and_resilience_programme_for_Mozambique_Malawi_and_Zimbabwe_%E2%80%93_PCIREP_-_Appraisal_report.pdf).

24 Available at www.adb.org/projects/52324-001/main#project-overview.

● THE HUMAN IMPACT OF DELAYED FUNDING

Speed, reduced response costs, and more effective responses—the three advantages of pre-arranged funding, as explored in Box 3—are crucial to reduce the human costs of crises. Discussions of funding can seem to be about numbers, but they are really about people. Contingency funds, early response mechanisms, triggers, anticipatory action, etc. are all a means to an end, not an end in themselves.

In this study, we have certainly identified the problem of lack of funding and delays in funding. There were very clear and direct impacts in the **emergency phase, two months into the crisis**. United Nations sitreps record that its appeals were funded at 30%–40%, meaning that responders have to ration funds and assistance, making hard choices about who gets support and who does not. After two months, WFP had a shortfall of US\$ 73 million in Mozambique and was expecting to provide less than the internationally agreed standards on food assistance—as they also had to do in Haiti, providing 83% of full ration. Responders were only able to provide support to the most vulnerable, leaving many others in need, as the Shelter Cluster did in Mozambique, where assistance was only provided in the worst affected areas and where there were gaps in the WASH response as new resettlement sites were opened (OCHA, 2019d). In Haiti, financial resources were needed to provide more durable shelter solutions for a wider caseload of affected people (OCHA, 2016).

The slowness of providing funding for drought situations increased levels of malnutrition, with acute and chronic impacts. In Kenya, 1.3 million people needed humanitarian assistance (IPC Phase 3) in August 2016; in

January 2017, this had increased to 2.6 million people; by May 2017, there were 343,559 acutely malnourished children; and by September 2017, 500,000 people were in at IPC Phase 4. It is worth being clear that IPC Phase 4 means that food insecurity is so severe that some people are dying, with children under the age of five being particularly vulnerable.

There is often a gap after the **emergency response funding finishes and before the reconstruction phase begins**, leading to widespread unmet needs for affected communities. In Mozambique, WFP again had to interrupt or discontinue food rations due to a funding shortfall, despite two appeal letters to the donor community in mid-February 2020 (WFP, 2020). While humanitarian agency support filled some of these recovery gaps, this was not done at the scale or within the timeframe needed (Zurich Flood Resilience Alliance, 2020). One year on, more than 90,000 people have been displaced and are still living in makeshift shelters or resettlement sites, with urgent needs including food, shelter, water, healthcare, household items, and education;²⁵ they were very vulnerable to two subsequent cyclones that hit central Mozambique.²⁶ There were similar problems of supporting early recovery after Typhoon Haiyan in the Philippines, and a review has concluded that transitions in and out of disasters, along with underlying poverty and vulnerability to disasters, might be reduced if mainstream development interventions systematically sought to manage disaster risk (Hanley *et al.*, 2014).

Delays in funding reconstruction can leave people in temporary, makeshift accommodation, cut off from

25 www.iom.int/sites/default/files/dtm/mozambique_-_cyclone_displacement_report_12_20_december_2019.pdf.

26 www.care.org/news-and-stories/press-releases/2-years-since-cyclone-idai-and-mozambique-has-already-faced-an-additional-3-cyclones/.

markets, livelihoods, and essential services for years. For example, donors pledged US\$ 1.2 billion to help Mozambique rebuild and recover at the Beira International Donor Conference at the end of May 2019,²⁷ but the government's Post-Cyclones Reconstruction Office (Gabinete de Reconstrução Pós-Ciclone) had not received that funding by early 2020 (Kleinfeld, 2019). As one example, the European Union made a pledge of €200 million at the conference, of which a €100 million loan, blended with a €10 million grant, was only agreed 18 months later.²⁸

Such delays increase suffering and lead to negative coping strategies, often having the worst impact on women and girls—women eat last and least; girls are more likely to be pulled out of school first; and both are more vulnerable to violence and sexual violence. People also get into debt: 66% of people surveyed in Nepal in December 2017 had taken out loans to reconstruct their homes (Inter-Agency Common Feedback Project, 2018), with concerns raised about poorer households being burdened with unsustainable debt (DFID, 2018). These short-term impacts can have very long-term consequences.

27 <https://news.un.org/en/story/2019/06/1039651>.

28 www.eib.org/en/press/all/2020-341-team-europe-provides-eur-110-million-for-mozambique-recovery-from-2019-cyclones.

● CONCLUSIONS AND RECOMMENDATIONS

Many factors influence the amount of funding that is needed in crises, but what is certain is that, once initial crisis needs are clear—and certainly when appeals have been issued and national capacities have been overwhelmed—international funding should be made available swiftly and cheaply to reduce the human and economic costs of crises.

We analysed international financial flows to nine countries for the 18 months after recent crises—drought, flood, cyclone, earthquake, and epidemic. Tracking these flows via international datasets is harder than might be expected, and it was important to understand the context and add nuance from narrative reports about these responses. This is a small sample involving a wide variety of contexts, but interesting findings emerged.

Preparedness and planning pays off, but there is not enough of it: All governments and response partners have invested in disaster risk management (DRM) in recent years, and this has shown real dividends. However, there remain significant gaps. In Mozambique, for example, the United Nations Review notes that planning would have benefited from the use of anticipatory triggers based on early warning indicators, and questions why there were no early-action triggers for the Zambezi river basin that is periodically affected by severe flooding.

It has not been possible to fully assess whether enough funding was provided, as there is currently no agreed way of accurately measuring needs. However, the partial information we have suggests that **funding amounts are significantly less than required:** two months into the crises, United Nations situation reports (sitreps) record that appeals are funded at 30%–40%, meaning that responders have to ration funds and assistance, making hard choices about who gets support and who does not. Our analysis finds that there were still major gaps in

funding against humanitarian appeals after six months for five of our nine cases; and while generous pledges were often made at reconstruction conferences, after 18 months only 15% (on average) of the Post-Disaster Needs Assessment (PDNA) had been committed.

The funding that was provided tended to be late: After six months, only 41% of total response funding had been committed, meaning that governments and responders were still largely unclear what funding would be made available for the response. They were still scrambling for funding, often competing with other implementing agencies for funds, and having to make plans in a very uncertain and shifting landscape. The amount of money being spent per crisis varied, but in most crises this was hundreds of millions of dollars. There are risks of diminishing efficiency and effectiveness when spending these major sums with so little pre-planning or clarity surrounding the big picture. Further, while a total of US\$ 6.84 billion was committed in the 18 months post-crisis, less than 64% was actually disbursed to the responding agencies and available to be spent.

One of the reasons for being late is that **very little funding is pre-arranged** (i.e. agreed in advance, and guaranteed to arrive if a certain set of circumstances arise). In the datasets, we found evidence of only 2.3% of the total funding being pre-arranged across four countries: the Catastrophe Deferred Drawdown Option (Cat DDO) in Peru; sovereign insurance for Vanuatu and Haiti; and the Pandemic Emergency Financing Facility (PEF) for the Democratic Republic of the Congo (DRC). This funding was fast—the pre-agreed budget support (Cat DDO and sovereign insurance) paid out in less than two weeks. It is possible that there were some programmes with internal pre-agreed funding—such as that used by the United Nations International Children’s Emergency Fund (UNICEF) in the malnutrition surge programming in

Kenya—but we were not able to quantify this, and it is at a much smaller scale.

We also found small **amounts of fast humanitarian funding**. Both the United Nations Central Emergency Response Fund (CERF) and the World Health Organization (WHO)'s Contingency Fund for Emergencies (CFE) have been specifically adapted to provide fast and flexible financing, and it shows. CERF funding was agreed swiftly (for Mozambique, all projects, apart from one, were approved within two days of the initial application) and allowed expenditures to be funded immediately after a crisis began, playing a crucial role in kickstarting the emergency response before other funds arrived. The total amount was US\$ 192 million, which may be a small part (2.8%) of total funding but represents a crucial part of first-phase emergency funding, at 11% of humanitarian funding.

Humanitarian funding for rapid-onset crises, which have a strong 'CNN effect', was often reasonably fast:

Two months after the crisis began, Vanuatu had 94% of its humanitarian funding committed, Nepal had 84%, Indonesia 74%, Haiti 64%, and Mozambique 49%. In some cases, funding can be incredibly fast: US\$ 148 million, plus lots of in-kind support, was committed to the Nepal crisis in just the first week. After six months, more than 90% of humanitarian funding for rapid-onset crises had been committed, apart from Mozambique, which was somewhat behind with 81%.

But funding for drought remains very problematic:

The accuracy of forecasts is improving, and thus it would be expected that substantial funding would be made available to support early action to mitigate the drought's impacts before this led to wide-scale human suffering and that funding would be swiftly delivered when the appeal is made, because funding institutions will have expected the call for assistance. However, neither of these occurred at the right scale.

- **Early action:** In Kenya, some funding was surged and pivoted from longer-term programmes. This represents very positive progress and reflects the focus on resilience and shock-responsive programming by government and others, but it remains extremely small in relation to needs. In Lesotho, some CERF funding arrived after one set of failed rains, but subsequent concerted advocacy from the United Nations Resident Coordinator and team after the next failure of the rains was to no avail.
- **Prompt response to appeal:** Funding did not arrive swiftly when the governments declared an emergency. After two months, funding committed for Kenya and

Lesotho was 11% and 1% respectively, and at six months this was still only 41% and 25% respectively.

Development, not humanitarian, actors provide most of the funding (74%), with the World Bank as the source of 50% of the funding. In our dataset, no other institution comes close, with the next major funders (across both development and humanitarian actors) being the Asian Development Bank (ADB) (providing 15% of total funds) and the government of the United States (providing 9% of total funds and 35% of humanitarian funding).

The World Bank is the biggest and also one of the slowest funders, with only 65% committed after 12 months, compared to 94% for both regional banks and bilateral development donors. Only 44% of committed funding was disbursed at 18 months.

- Some of the slowness of longer-term funding is attributable to reconstruction projects, which would naturally occur later in the crisis timeline, and to government capacity to absorb the funding. However, not all the World Bank's support is for reconstruction and slow disbursement was present across projects and disasters. Considering that the World Bank is the largest funder and both commitments and disbursements come late in the crisis timeline, and also that the issue of timeliness has been raised by other analysts, there may be scope to improve.
- The World Bank's Contingency Emergency Response Component (CERC) mechanism can pivot significant funding (typically tens of millions of dollars) to a crisis; however, it is not clear how quickly this is disbursed. It is likely that more *ex ante* planning for CERCs will enable implementation to begin more quickly. CERCs are now being systematically included in the health portfolio, with plans to adapt triggers for greater sensitivity to health emergencies. This is very positive and increased planning like this offers real advantages for all CERCs.

Just over half (53%) of total funding committed was in the form of loans: Poorer countries borrow less—for the three countries with the lowest gross domestic product (GDP)/cap, loans represented 13% in Mozambique, 35% in DRC, and 48% in Nepal. The ability of poorer countries to finance response and recovery—and thus the quality and speed of their response and recovery—is determined by and limited to their ability to borrow; this likely needs a rethink. For other countries with more ability to borrow, governments have to trade off the long-term risks of not investing in recovery with the long-term risks associated with taking on more debt.

There remains too great a disconnect between humanitarian and development actors and approaches:

In Kenya, some donors were reluctant to release funds before a government declaration of emergency, and some development actors still see crisis prevention as primarily an area of humanitarian expertise and responsibility. This contributed to a situation in which there was too little preventive action from development actors and too late preventive action from humanitarians. In Mozambique, while the value and need for a resilience approach is widely recognised, it is currently underemphasised and underfunded, with a clear divide between the development and humanitarian sectors in the cyclone response.

The lack of funding and delays in the arrival of funding has an unequivocal human cost: There are very clear and direct impacts in the emergency phase, where responders have to reduce the assistance provided to below international standards (for example, cutting food rations) and reduce the number of people who receive assistance, leaving many others in need. Delays in funding longer-term recovery and reconstruction can leave people without support for months and years, leading to widespread unmet needs. Such delays increase suffering and lead to negative coping strategies, often with critical impacts on women and girls, and also push people into debt. These short-term impacts can have very long-term consequences.

Recommendations

As many risks are understood and many crises can be predicted, all funding institutions, agencies, and actors should **provide a greater proportion of their funding as pre-arranged** based on pre-agreed triggers for response, such that pre-arranged finance becomes the primary method for funding crisis response by 2030. With the assurance that finance will arrive, governments and response partners can put systems in place in advance to ensure that this funding will be used most effectively. They can develop contingency plans for different scenarios and sophisticated plans for delivery: preselecting contractors, drafting memoranda of understanding, and considering how key elements (such as governance, logistics, essential services, communications, procurement, and electronic finance) might work in a crisis. Developing such a plan in advance supports public engagement, transparency, and accountability.

For unforeseen risks, all funding institutions, agencies, and actors should **provide a greater proportion of their funding via fast and flexible mechanisms**, giving governments and response partners the ability to scale

up very quickly once the crisis has hit. Knowing that this funding is available could help responders plan and develop a surge capacity for swift scale-up. Such funds should be made available to preselected national and international non-governmental organisations (NGOs), as well as to United Nations agencies, to support a faster and stronger response.

Development partners should increase investment to support government-led crisis response: Investing in risk reduction, preparedness, and the systems and infrastructure to enable a nationally led crisis response will both reduce costs and put in place systems to effectively deliver response and absorb financing when crises occur. Development partners should design more programmes to be specifically shock-responsive such that health, social protection, and other services can scale up smoothly and swiftly.

All actors need to work together to solve the problem of poor response to drought to enable greater quantities of funding to be released more swiftly as the situation deteriorates. All the recommendations above are particularly important for drought. This needs to go alongside agreed triggers and early actions, as well as greater coordination and integration between development and humanitarian sectors. Humanitarian funders should be standing by to release funding as soon as a drought appeal is made.

The World Bank should consider how to speed up funding for crises: This will require an increased focus on preparedness, working with governments to invest in the systems for response. It also requires introducing flexible triggers and *ex ante* planning for CERCs and the adaptation of the World Bank's Crisis Response Window (CRW) so that more funding passes through the Early Response Financing Framework with pre-agreed triggers.

Humanitarian and development thought-leaders, crisis analysts, and loan providers should explore the role of loans in crisis response and recovery for the poorest countries: They can use the space created by COVID-19 to consider needs, modalities, and limits for debt restructuring and natural disaster clauses in debt instruments.

This research has revealed some very interesting findings, but the authors recognise that the dataset was small and may have been skewed by particular crises. **This research should be expanded to a greater number of crises** to validate and explore these findings further (there may be a case for a global database of crisis funding flows), including considering the optimum speed for different types of crisis funding.

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● ANNEX: MORE DETAILED METHODOLOGY FOR DATASET PRODUCTION

Data parameters

Time: We sought to capture all funding explicitly in response to a crisis—whether immediate response, recovery, or reconstruction—within 18 months of the official start of the crisis. This span is long enough to allow all funding plausibly related to crisis response in some way to be counted;²⁹ taking a shorter window might result in missing some very slow funding. The official start of the crisis is the date of the earthquake, the cyclone landfall, the first confirmed case of Ebola, and the political declaration of emergency for drought and (in Peru) flooding.

We also sought to identify funding committed or disbursed shortly before some of the crisis events, where relevant. This is to ensure that anticipatory funding to the crisis response is captured where there might have been information available on the impending crisis prior to it escalating. These periods vary by type of disaster.

- For the floods in Peru, the heavy rains started in January 2017 and funding from 01 January 2017 onwards will be considered. The government subsequently declared an emergency in some areas on 03 February, and declared a Level 5 emergency on 29 March 2017.
- For drought, we will consider the end of the season of failed rains.
 - In Lesotho, there were three back-to-back failed harvests: the 2017/18 season was poor; the 2018/19 planting season was badly affected by late rains and scorching temperatures; and below-average rainfall

was forecast for the 2019/20 season (October to March). A disaster was declared on 30 October 2019. The analysis start date is the end of the failed rains in 2019 (31 March).

- In Kenya, drought began when the long rains failed between October and December 2016. United Nations warnings were given in December 2016 and on 01 January 2017; the government declared an emergency on 10 February 2017. The analysis start date is the end of the failed rains (31 December 2016).
- For cyclones, the period will be one month to capture any early action/funding (this is conservative as most cyclones come with just a few days of warning; Hurricane Matthew had a few weeks).

Funding date: Three key dates are often used.

- The pledge can be more of a political commitment to fund and is not guaranteed; not all pledges are realised. Potential recipients are not likely to scale up their activities on the basis of a pledge, and thus we will not use this.
- Committed funding is a legally binding commitment to fund. For FTS, this is defined as ‘a contractual obligation regarding the funding between the donor and appealing agency’; for OECD: ‘A firm obligation, expressed in writing and backed by the necessary funds, undertaken by an official donor to provide specified assistance to a recipient country or a multilateral organisation.’

²⁹ An examination of the CRW suggests 18 months is long enough for the World Bank projects. With the exception of the Haiti earthquake and one flood response project in the Solomon Islands, all projects were committed within 18 months of the crisis start date for climate and health shocks: https://static1.squarespace.com/static/5c9d3c35ab1a62515124d7e9/t/5ca60c44e5e5f0e319a4b570/1554386042614/Paper_3_IDAs_Crisis_Response_Window.pdf.

- Disbursement is when the funding is transferred from donor/funder to the recipient organisation. There is always a delay between commitment and disbursement.

Not all datasets include both commitment and disbursement data: far more data are available for **commitment**, so the commitment date has been used as the primary metric in this study. For humanitarian data, we mostly had commitment data, but in a few cases we only had disbursement data and so we used those instead. This was only a significant issue for the Indonesian case study, where we had to use the disbursement date for 76% of the total volume of humanitarian funding in our dataset.

Due to the disparity between commitment and disbursement data on the development side, we also wanted to consider when funding was **disbursed**. However, on the humanitarian side, FTS generally does not include disbursement data; any disbursement delays are mostly due to administration and public financial management issues, and total figures for commitment and disbursement would be expected to be the same within the 18-month timeframe. Larger organisations often start their work on the basis of a commitment, so for humanitarian spend we assumed that the disbursement date was the same as the committed date. This is a reasonable assumption.

On the development side, the disbursement may be spread over a number of years, so there may be a significant difference between commitment and disbursement totals within our funding period. We have good disbursement data for World Bank funding and for much of the regional bank funding; however, we have a gap for bilateral development funding identified through OECD.

Pre-arranged finance

The Centre for Disaster Protection defines pre-arranged finance as funding that has been agreed in advance to be triggered if a certain set of circumstances arises, e.g. if winds of a certain level are reached or if a vegetation index drops below a certain level. Examples of pre-arranged finance include insurance and risk pooling, contingent credit, contingent grants, and FbF.

This differs from donor or government funding that has been set aside, generally for crisis response but with no specific planning regarding what sector it will be spent on and under what circumstances, or (in some cases) which organisation will receive it (i.e. where applications would

be assessed on a competitive basis and there is no assured access to funding). This would include global contingency funds, country-based pool funds, or donor contingency funds (e.g. the UK Foreign, Commonwealth and Development Office crisis reserve) and World Bank CERCs.

There may be some cases where agreements have been made with implementing agencies to enable them to pivot/repurpose funding for the crisis. This would include flexible multi-year financing, crisis modifiers, or large contingency funds within a project. Unfortunately, our datasets will not identify these as it is not common practice to report on repurposing flows that have already been reported; the amounts triggered or allocated from project contingency funds are likely only to be captured within financial reports exchanged between partners and donors. They are also likely to be relatively few in number and relatively small. We will search for narrative reports about the response to see if we can find any information on these to support the analysis. As described above, we will start our analysis prior to the official crisis start date to identify any anticipatory or early funding.

Datasets

Humanitarian grant funding

FTS is currently the most comprehensive source of data on grant flows to crisis events in close-to-real time. It contains emergency markers for a large number of hazards across a timespan of around 20 years. For the selected case studies, it includes emergency markers for each of the crisis events and tracks funding against Humanitarian Response Plans in all the identified countries in the years of interest. In seven of the nine case studies, those response plans are primarily designed to respond to selected crisis events; in two countries (Mozambique and DRC), the plans address complex crises with other contributing factors. FTS data on financial flows will therefore form the core of the dataset on grant support to the crisis responses.

Given FTS is a voluntary reporting platform, there might be some actors not reporting to it consistently. We will compare funding figures from bilateral donors between FTS and the OECD DAC CRS for each case study country. If CRS shows a significantly larger amount of total humanitarian assistance provided, we will attempt to identify flows that are relevant to the crisis response. This way we have identified additional humanitarian funding to the emergency response in Haiti and Nepal reported to CRS, but not to FTS. Please see 'Other international grant funding' for more information on our methodology of extracting data from the CRS.

The emergency markers will be the primary identifier for financial flows on FTS relevant to the crisis response. All flows under the respective designated response plans—as long as they primarily aim to respond to the crisis event of interest—should contain this marker, but we will carry out spot-checks against flows under response plans to ensure we do not miss relevant funding. To avoid double-counting, we will only include FTS flows that are reported to be incoming funding for the emergency response and exclude any internal transfers of funds within the response. We will complement this set of flows with a keyword search on the flow description of all other financial flows to the countries of interest for 18 months after the initial crisis event and for the relevant time period before. This is to ensure we capture relevant flows where the reporting organisations have not included information on the emergency. The keywords employed for this are tailored to each crisis event and, if necessary, translated into multiple languages depending on the country of interest. Each individual financial flow resulting from the keyword search will then be manually verified to eliminate false positives.

To identify the timing of funding for FTS data, we will combine the flow date with other information available on FTS. The meaning of the flow date is ambiguous; according to the FTS glossary, it is defined as ‘[t]he date on which the funding flow was pledged, committed or paid. If this date is not available, FTS uses the decision date or as last resort, the date the information was reported to FTS.’ Checking the flow date with other dates reported for individual flows, such as the decision date or when the flow was reported, will tell us what the flow date might therefore express. This in turn allows us to establish for each case study whether the analysis of flow dates is primarily about the timing of funding or the timing of reporting. By cross-checking various dates assigned to financial flows in this way, we find that either the commitment or disbursement date is known for over 90% of the flows in each of the nine case studies.

We will use the following dates assigned to FTS flows to identify when funding was committed:

- the flow date for commitments; and
- the decision date for disbursements (‘paid contributions’ on FTS). This indicates when a donor is reported to have made the funding commitment for the corresponding flow. In the absence of a decision date, we will revert to the flow date, indicating when the flow was disbursed or reported. The only one of our case studies where the decision date for commitments was not known for a significant number of flows is Indonesia, where we had to use the

disbursement date for 76% of the total volume of humanitarian funding in our dataset.

International financial institutions

To track the response by international financial institutions, multiple sources will be used to put together the data. We will look at funding by the World Bank, the IMF, and regional banks, including the AfDB, the ADB, the CDB, and the IDB. When relevant, pay-outs by regional risk pools such as the ARC, the PCRIC, and the CCRIF will also be included in the overview. We will also seek information on debt relief provided by the Paris Club.

The **World Bank** lists all their projects in their [project database](#), which will be used to find all the funding that relate to the event. Searching by country, all projects in the 18 months after a crisis event will be evaluated based on the project information document. This should clearly mention an emergency response to the event. Projects that focus on DRR in the aftermath of a crisis but have no specific response elements, are not being included. All development policy financing approved in the 18-month timeframe is included. We also search whether there are any Cat DDOs for the country. If a disbursement is found for the Cat DDO within the 18 months after the event, this amount is counted as crisis response by the World Bank. To collect the disbursed amounts and their timing per project, we consult a [dataset put together by the Center for Global Development](#), which contains all the World Bank disbursement data from 1992 to July 2020. In the case of an additional financing project, the disbursement data from the parent project are used to complete our overview by looking at the amounts disbursed between the approval date of the additional financing project and the time the additional financing amount has been reached. Capturing additional finance should make sure most of the CERCs are captured. Additional press release searches and consultation of a previous review on CRW allocations (Spearing, 2017) will be used to complete this overview of CERCs.

As there is no clear funding overview per country by the **IMF**, we follow a triangulation approach to collecting the data, which is a reliable method given the consistent reporting by the institution. A first source is the [Member Financial Data](#) per country, to see if there has been a new IMF loan in the 18 months after a crisis event. As many of the IMF loans are disbursed in the same month as or the month after approval, the [Past IMF Disbursement and Repayments for all members](#) can be checked to verify whether the same amount can be found there. Lastly, the country pages on the IMF website are consulted to find any press releases that confirm the loans found in the financial and disbursement data mentioned before.

A methodology similar to the World Bank approach is followed to collect data for the regional development banks, consulting the institutions' project webpages per country (IDB, AfDB, ADB, and CDB). Projects within the 18-month timeframe are checked for relevance. Disbursement data are available on the individual project pages for the AfDB and the ADB, but there is not as much information available around the timing of these disbursements. Their reporting via the International Aid Transparency Initiative (IATI) can be checked to get more detail about the disbursements using data that are available on d-portal. This portal also includes disbursement data for the IDB.³⁰

Depending on the case, there might also have been payouts by **regional risk pools** to be included in the overview. This information can be searched for on the websites or in press releases from the [ARC](#), the [CCRIF](#), and the PCRIC.

Other international grant funding

The OECD DAC [CRS](#) does not tag funding flows to crises or provide disbursement dates. It is therefore not a primary source of data for this study. However, we use it to cross-validate FTS figures and to identify development grant funding from bilateral donors. CRS data are only available up until 2019, so it will not be possible to use this in full for three crisis responses—the 2019 drought in Lesotho; cyclones Idai and Kenneth in Mozambique during March and April 2019; and the earthquake in Indonesia in September 2018.

The relevance of CRS flows to the emergency response will be established by using a keyword search on the short project description, on the long project description, and on the project titles, using the same set of keywords as employed for FTS. Each individual CRS funding entry resulting from this process will again be manually verified to eliminate false positives.

- We only include humanitarian funding from CRS (reported against the DAC 5 purpose codes 720

(Emergency Response), 730 (Reconstruction, Relief, and Rehabilitation), and 740 (Disaster Prevention and Preparedness)) that we identify to be relevant to the crisis response and could reasonably assume to be additional to the funding from FTS based on comparing the two datasets.

- Development funding from bilateral donors on CRS—all other DAC 5 purpose codes—was also included in our analysis, if confirmed to be relevant to the crisis response following the manual checks. We have attempted to avoid duplication between CRS and FTS datasets by comparing (if available) project IDs, project descriptions, and donor–recipient organisation pairs for each individual flow.

To analyse the timeliness of funding flows from CRS that we identified as relevant to the crisis responses, we used the reported commitment date. It is not possible to identify the timeliness of disbursements using CRS data as the disbursement date is not reported; only the year of disbursement is.

It should be noted that the quality of project or flow descriptions on both the CRS and FTS vary between different reporting agencies. In the absence of crisis markers, the keyword searches might therefore underestimate bilateral development funding to the emergency response.

Combining funding datasets


Before combining the collected data on funding flows with the crisis timeline, the different funding datasets need to be merged while avoiding double-counting. This includes checking the FTS data for whether they include any financial flows from international financial institutions that have been sourced separately from their respective websites as part of the research process. If so, these will be removed from the FTS dataset, unless they can clearly be identified as being additional to information available on the international financial institutions' own websites.

30 Note that reporting by the IDB, CDB, and ADB is not always complete, or on IATI; we will note where information cannot be found in a consistent way.

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