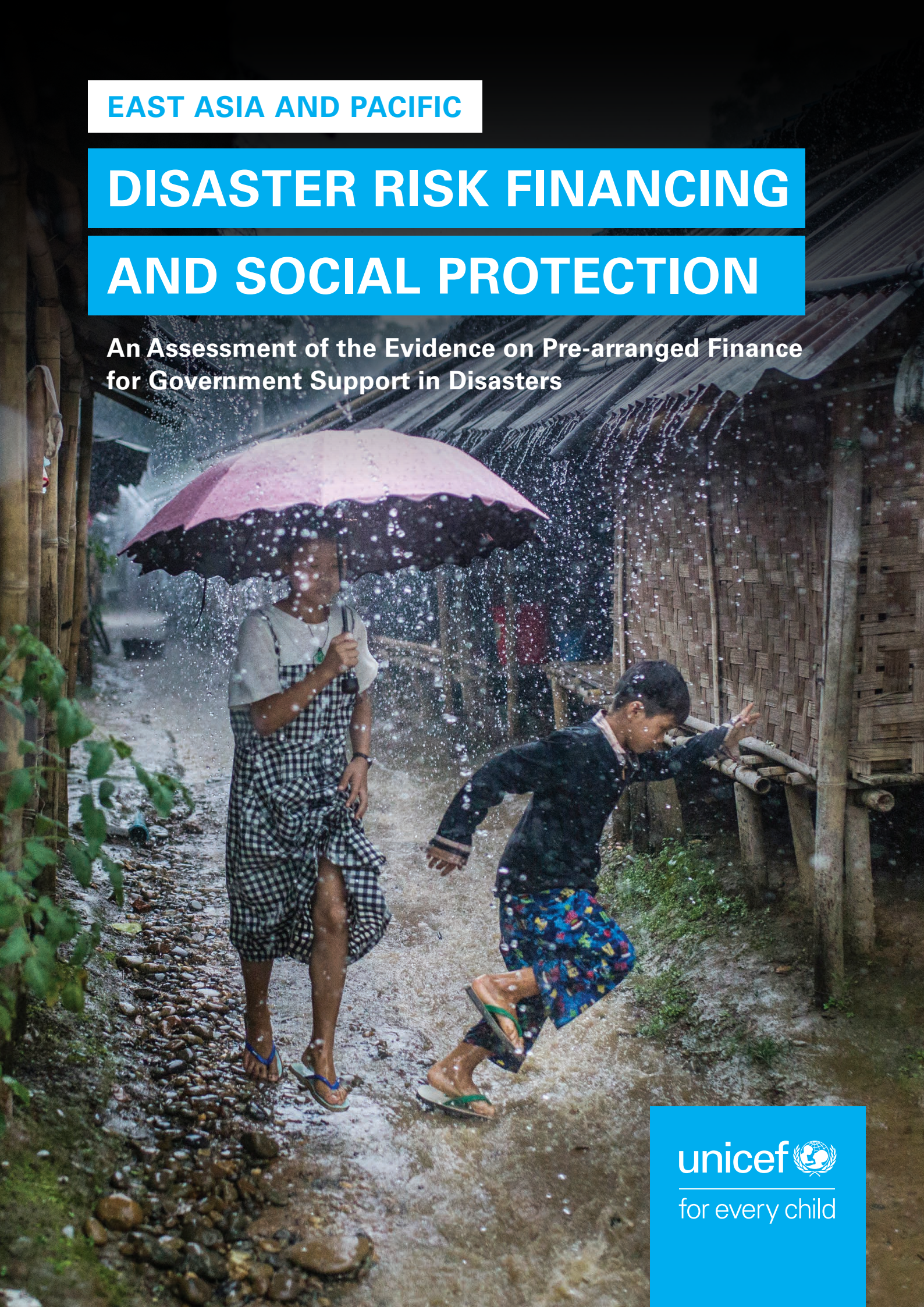


EAST ASIA AND PACIFIC

# DISASTER RISK FINANCING AND SOCIAL PROTECTION

An Assessment of the Evidence on Pre-arranged Finance  
for Government Support in Disasters



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for every child



**EAST ASIA AND PACIFIC**

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## ACKNOWLEDGEMENTS

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This report was prepared by Andrea Rossi, UNICEF EAPRO Social Policy and Economic Analysis Regional Advisor, and Ruben Villanueva, UNICEF EAPRO Social Policy consultant. The global stock-taking was carried out by Matthew Hobson, whereas research in Southeast Asia was conducted by Cecilia Costella, Nicholas Travis and Maham Farhat. Country case studies were compiled with the support of Fides Borja in the Philippines, and Ni Made Rahayu Maitri and Bastian Zaini in Indonesia.

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UNICEF East Asia and Pacific Regional Office  
19 Phra Athit Road Bangkok 10200 Thailand

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Email: [eaprosocialpolicy@unicef.org](mailto:eaprosocialpolicy@unicef.org)  
[www.unicef.org/eap/](http://www.unicef.org/eap/)

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WAINGMAW - July 21, 2020: A rainy day in the camps under COVID-19 lock-down, Maina IDP camp, Waingmaw, Kachin, Myanmar. CREDIT: Minzayar Oo – UNICEF

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## Key Abbreviations

<b>4Ps</b>	Pantawid Pamilyang Pilipino Programme	<b>IFRC</b>	International Federation of Red Cross
<b>AA</b>	Anticipatory Action	<b>ILO</b>	International Labour Organization
<b>ADB</b>	Asian Development Bank	<b>IMF</b>	International Monetary Fund
<b>AHA</b>	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management	<b>LGUs</b>	Local government units
<b>AMS</b>	ASEAN member states	<b>MNT</b>	Mongolian Tughrik
<b>ARC</b>	African Risk Capacity	<b>NDPC</b>	Natural Disaster Prevention and Control
<b>ASEAN</b>	Association of Southeast Asian Nations	<b>NDRRMC</b>	National Disaster Risk Reduction and Management Council
<b>BNPB</b>	National Agency for Disaster Management	<b>NDRRMF</b>	National Disaster Risk Reduction and Management Fund
<b>CCA</b>	Climate change adaptation	<b>NGO</b>	Non-governmental organization
<b>CERF</b>	Central Emergency Response Fund	<b>ODA</b>	Official development assistance
<b>CHR</b>	Swiss Franc	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>DOLE</b>	Department of Labour and Employment	<b>PacRIS</b>	Pacific Risk Information System
<b>DRF</b>	Disaster risk financing	<b>PCRAFI</b>	Pacific Catastrophe Risk Assessment and Financing Initiative
<b>DRFI</b>	Disaster risk finance and insurance	<b>PCRIC</b>	Pacific Catastrophe Risk Insurance Company
<b>DRM</b>	Disaster risk management	<b>PFB</b>	Pooling Fund Bencana
<b>DRR</b>	Disaster risk reduction	<b>PFM</b>	Public finance management
<b>DSWD</b>	Department of Social Welfare and Development	<b>PhP</b>	Philippine peso
<b>EAPRO</b>	East Asia and Pacific Regional Office	<b>QRF</b>	Quick Response Fund
<b>EAP</b>	East Asia and Pacific	<b>SAP</b>	Social amelioration programme
<b>EM-DAT</b>	Emergency Events Database	<b>SEADRIF</b>	Southeast Asia Disaster Risk Insurance Facility
<b>FJ\$</b>	Fiji Dollar	<b>SRSP</b>	Shock-responsive social protection
<b>FAO</b>	United Nations Food and Agriculture Organization	<b>UN</b>	United Nations
<b>FbF</b>	Forecast-based Financing	<b>UNICEF</b>	United Nations Children's Fund
<b>FNPF</b>	Fiji National Provident Fund	<b>US\$</b>	United States Dollar
<b>GDP</b>	Gross domestic product	<b>WB</b>	World Bank
		<b>WFP</b>	World Food Programme

# EXECUTIVE SUMMARY

A strong and well-financed social protection system can enable governments to protect households and livelihoods, especially children, from the worst impacts of shocks and disasters. This requires ensuring disaster financing is quickly and adequately released and channelled to social protection responses in times of crises. National Shock responsive social protection (SRSP) systems can support disaster risk management objectives promoting the use of cash before, during and after various shocks, including natural disasters, disease outbreak and economic crisis. Disaster Risk Financing (DRF) solutions and SRSP contribute both to build a comprehensive approach to resilience of the poorest and most vulnerable including children. Social transfers contribute to the economic resilience of households, whereas pre-arranged predictable funding adds to the financial resilience of not only households but of whole communities.

While the opportunities for linking DRF with SRSP are becoming more recognized, comparatively little is known about the factors that enable or hinder such financing reaching those who need it most in a quick, transparent, and efficient way. Risk financing enables governments to understand how much the

scale up mechanism – social protection systems in this case – could cost, and develop appropriate strategies, with clarity on who pays, to finance response – i.e., how to position funding in advance so as to trigger assistance quickly.

Governments pay a significant portion of post-disaster response costs, and these expenditures can be seen as a contingent liability – an obligation that may or may not come due, depending on whether particular events occur. Social protection systems represent an increasingly important source of explicit contingent liability in the region. Quick post-shock assistance to vulnerable households with children is essential to protecting their welfare. Risk financing mechanisms can work together with established social protection systems to help reach the poorest and most vulnerable children rapidly following shocks.

By analysing the gaps and strengths of current systems in several countries in East Asia and Pacific, especially those highlighted by the COVID-19 crisis, this report provides lessons and recommendations to improve the effectiveness of financing for SRSP in the region.





Most countries in East Asia and Pacific have well-developed and institutionalized disaster risk management (DRM) strategies and plans. DRM structures and coordination mechanisms vary in terms of degrees of decentralization and devolution, but often include coordination arrangements with line ministries and across levels of government, including with social protection agencies. However, coordination challenges arise from both the allocation of roles and budgets: in most countries, many line agencies have their own disaster response programmes and budget allocations, which might seem like an effective strategy in the face of complex budgeting and disbursement rules, but it also clearly leads to duplication and overlap when disasters strike.

The main source of funding for disaster response appears to be domestic finance. There are significant differences in the development of dedicated DRF instruments across the region, but overall, there is reliance on risk retention instruments (contingency loans, and budgetary reserves and mechanisms) and international assistance, with limited use of market-based risk transfer mechanisms. The Philippines has the most comprehensive system of the countries reviewed and is the only country that has successfully transferred disaster risks to insurance markets. The Southeast Asian Disaster Risk Insurance Facility (SEADRIF) aims to assist governments that wish to develop their financing strategies for disasters as well as develop risk pooling mechanisms but so far, its members (Myanmar, Lao PDR, and Cambodia) have yet to introduce such measures.

Current ex-ante DRF arrangements appear to provide inadequate fiscal capacity to deal with the costs of disasters when they happen. The gap in pre-arranged financing is often met through ex-post budgetary arrangements through mechanisms like supplementary budgets, reallocations, and borrowing, effectively relying on risk retention instruments to cover spending gaps. More importantly, the shortfall between budgeted funds for disaster response and actual spending has been increasing as the frequency and costs of disasters increase while budgeted allocations remain stable.

The use of 'pre-arranged' PFM regulations to manage disaster expenditures varies across the region, as does the timeliness of financing, partly due to such pre-established arrangements.

When institutional and programmatic arrangements are not aligned with PFM rules, it hinders implementation of responses. In most countries, funding flows often follow DRM institutional and legal structures, which means that they tend to be allocated in a decentralized and multi-sectoral manner (e.g., Viet Nam). On the other hand, in some countries like Indonesia, funding flows are centralized and restricted, even as institutional and operational arrangements for disaster response are not. There are trade-offs between expenditure control and speed of disbursement, with cumbersome rules often leading to the under-utilization of (already insufficient) funds. At the same time, tracking disaster expenditures is a major challenge for all countries across the region, leading to a lack of transparency around the use of funds and raising serious concerns around efficiency.

Countries in the region had few or no experiences with SRSP before COVID-19, in part related to the limited scope of their social protection systems. In order to finance the responses to COVID-19, most countries had to put in place special regulations to enable large scale borrowing and significantly redirecting existing funds. Fiscal responses to COVID-19 in the region were mostly financed from contingency budgets, budget reallocations, domestic borrowing, international borrowing, and private donations (humanitarian flows were not included in the analysis).

COVID-19 also led to flexibility in PFM rules. There are currently limited linkages between social protection and DRF strategies. However, social protection is part of the disaster response system in many countries, and in some social protection agencies receive budgetary allocations. In most countries, social protection does not appear to be linked to protocols for early action and disaster response, except to the extent that social protection agencies are sometimes part of coordination mechanisms led by the DRM agency.



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COVID-19 has shown it is not impossible to rapidly respond through social protection even with limited pre-existing systems, but the scale of the response is unlikely to become a model for future responses to disasters caused by natural hazards. Regional efforts seem to be focused on the development of risk transfer instruments and risk pooling, though findings point to these instruments only being useful in as much as they are part of a comprehensive set of risk financing instruments that includes improvements on how risk retention instruments and PFM arrangements work. Humanitarian action and financing are important sources of DRF in the region; however, they are mostly ad hoc and unpredictable. The strengthening of social protection systems that COVID-19 has resulted in should provide a more solid base for aligning with humanitarian systems.

However, for humanitarian assistance to make use of social protection systems more effectively, humanitarian donors will need to overcome challenges in financing the building of social protection system, as systems need to be in place before they can be used for shock response.

The report is aimed at practitioners and policy makers alike, from the DRM but also the social protection sectors. It gathers the evidence on both topics available to date and provides the rationale for strengthening disaster risk financing strategies geared towards social protection. The report follows through a set of recommendations from a policy as well as an evidence-generation standpoint. These findings form a body of knowledge critical to inform ongoing and future discussions around public, disaster risk and climate finance for social protection post-pandemic.





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# 1 INTRODUCTION

A strong and well-financed social protection system can enable governments to protect households and livelihoods, especially children, from the worst impacts of shocks and disasters. This requires ensuring disaster financing is quickly and adequately released and channelled to social protection responses in times of crises. While a growing body of work explores the opportunities for linking disaster risk financing (DRF) with shock-responsive social protection (SRSP), relatively little is known about the factors that enable or hinder such financing to reach those who need it most in a quick, transparent and efficient way.

In East Asia and Pacific, DRF and SRSP are relatively new sectors, although there is substantial interest in operationalizing them in the face of increased climate and disaster risks. Southeast Asia, the most disaster-prone region in the world (Dubey et al., 2022), experiences a significant number of large disasters, although the vast majority of shocks are small or localized. While the region is highly exposed to shocks arising from natural hazards, especially climate-related ones, SRSP systems are still nascent, and few countries have established comprehensive DRF strategies that link to them. Overall, the region relies on a mix of largely ex-post humanitarian and limited government financing to respond to crises. With intensifying risks from climate change, there is increased interest in more

permanent and efficient systems for anticipation of and responses to shocks, supported by adequate risk financing and disbursement mechanisms.

The COVID-19 crisis has propelled extraordinary investments in social protection in the region in terms of scale, speed and levels of financing, offering an important learning opportunity. The crisis has highlighted strengths and weaknesses in financing SRSP, including significant innovations in sources of financing, as well as adjustments to public finance management (PFM) procedures and systems. This pandemic underscored the need to consider overlapping threats, while contributing to the growing interest in tracking compound risk in development and humanitarian settings. It poses the ultimate question of how to apply the principles of DRF to broader crises, including compounding shocks. In the current context, existing DRF instruments need to be developed or updated urgently to replace resources drained by the COVID-19 crisis and ensure funding is available when the next disaster strikes (Calcutt et al., 2020). By reviewing best practices, challenges, as well as possibly missed opportunities, countries in the EAP region can capitalize on these lessons to maintain and expand SRSP for future shocks. A robust system can be then designed through enabling partial early scaling-up of social protection schemes as a no regrets mechanism to the most

vulnerable households. “No regrets” strategies are enablers for faster responses (ASEAN, 2020). They are enacted early without being certain about all dimensions of the impending hazard. If the disaster does not develop, the scaled up social protection programmes will still benefit resilience building as it targets the most vulnerable (Ibid).

Linking DRF solutions and SRSP systems contribute to building a comprehensive approach to resilience of the poorest and most vulnerable. It has been noticed (Clarke et al, 2016) that ‘pre-arranged finance’ acts as the ‘glue’ that holds credible plans together and makes them strong enough to withstand the complex political economy of disasters. Without such pre-committed finance, plans and decision processes are often just pieces of paper, ignored when disaster strikes. Yet, finance alone is not enough. Understanding which impacts SRSP can effectively address or mitigate, such as pre-empting negative coping strategies affecting households and children specifically, is as essential as the necessary financing strategies to trigger the response. Routine social transfers contribute to the economic resilience of households in the long-term, whereas pre-arranged predictable funding adds to the financial resilience of not only households, but of whole communities.

From a disaster risk reduction (DRR) perspective, investing on SRSP means capitalizing on the management of the so-called ‘residual risks’ – that is, managing risks that cannot be prevented nor reduced, and are known to give rise to, or already, materialize into a disaster event. Evidence shows (UNESCAP, 2020) that even with sufficient investment, some residual risk shall remain. Policymakers can, therefore, address this by utilizing a range of instruments to expand access to insurance, including social protection.

Risk finance by itself is not a silver bullet. It needs to be part of a broader set of activities to strengthen preparedness, embed early action and build systems and capabilities to deliver assistance rapidly and effectively to those in need. Furthermore, while the focus on risk financing

is important, it cannot be seen or discussed in isolation as financing is informed by and for each specific risk profile – such as floods, cyclones, drought – and the intervention context. DRF enables governments to understand how much the scale-up mechanism – social protection systems in this case – could cost for a specific risk and develop appropriate strategies with clarity on who pays to finance the response. In other words, how to position funding in advance so as to trigger assistance quickly.

This report introduces the links between SRSP and DRF by discussing the basic elements of DRF, existing instruments and guidelines and some emerging good practices based on the relatively limited experiences to date, either globally or regionally. The report reflects on how DRF can be used to resource social protection programmes before (early/anticipatory action and resilience building), during (immediate relief) and after (recovery). It examines the factors that enable or constrain the effectiveness of risk financing mechanisms for SRSP, in particular social assistance, in East Asia and Pacific. The analysis focuses on the links between DRF, adequate PFM mechanisms, and the implementation of response measures through social assistance instruments during covariate shocks. By analysing the gaps and strengths of current systems in several countries in the region, the report provides examples, lessons, and recommendations to improve financing flows for SRSP.

The report is aimed at practitioners and policy makers alike, from the DRM but also the social protection sectors. It gathers the evidence on both topics available to date and provides the rationale for strengthening disaster risk financing strategies geared towards social protection. The report follows through a set of recommendations from a policy as well as an evidence-generation standpoint. These findings form a body of knowledge critical to inform ongoing and future discussions around public, disaster risk and climate finance for social protection post-pandemic.



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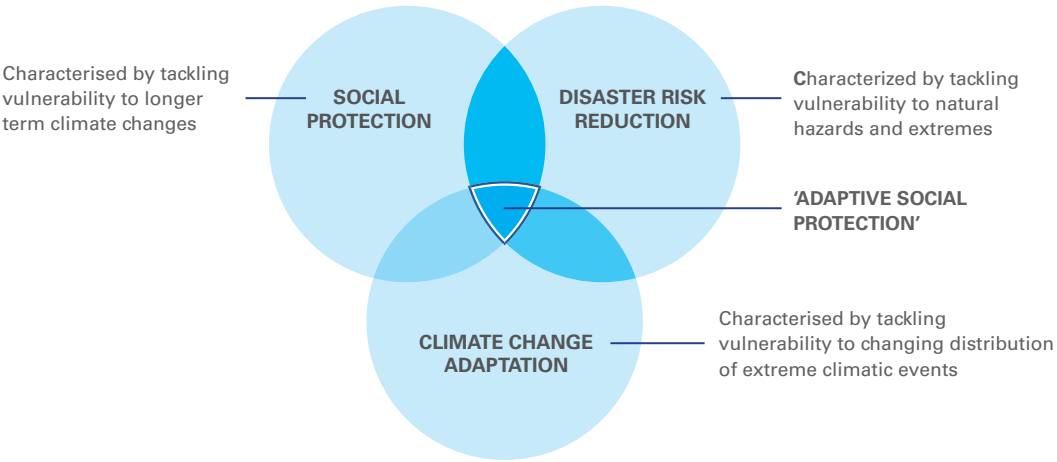
# 2 SHOCK-RESPONSIVE SOCIAL PROTECTION AND DISASTER RISK FINANCING

## 2.1 What is shock-responsive social protection?

Shock-responsive social protection (SRSP) is an area of work that recognizes that social protection programmes can be used not only as a means of addressing poverty, but also to manage risks associated with disasters that are exacerbated by climate change. Regardless of the term used for referring to the same concept, SRSP – also called

adaptive, resilience-oriented, risk-informed or disaster responsive social protection – intersects with disaster risk reduction (DRR) and climate change adaptation (CCA), as shown in Figure 1. Another commonality to all three domains is they all are risk-informed, using risk analytics as the underlying factor for programming.

**Figure 1** Intersectionality of SRSP



Source: Davies et al., 2009.

<sup>1</sup> According to the definition by the Social Protection Interagency Cooperation Board (SPIAC-B), social protection is “a set of policies and programmes aimed at preventing or protecting all people against poverty, vulnerability and social exclusion throughout their lifecycle, with a particular emphasis towards vulnerable groups.”

One of the most pertinent lessons from the COVID-19 pandemic in all countries globally (Box 1), is that SRSP is not a separate set of interventions or programmes running in parallel to social protection systems. They are basically the same: a good social protection system needs to be shock responsive.

In the case of covariate shocks, nearly everybody is presumably vulnerable to risks as nearly anybody can be hit by a shock. Social protection is meant to provide protection to the person once a risk materializes or a shock strikes. Social protection is not meant for the poor alone, but for everyone who is vulnerable to risks and shocks. In most

countries, this means nearly the entire population.

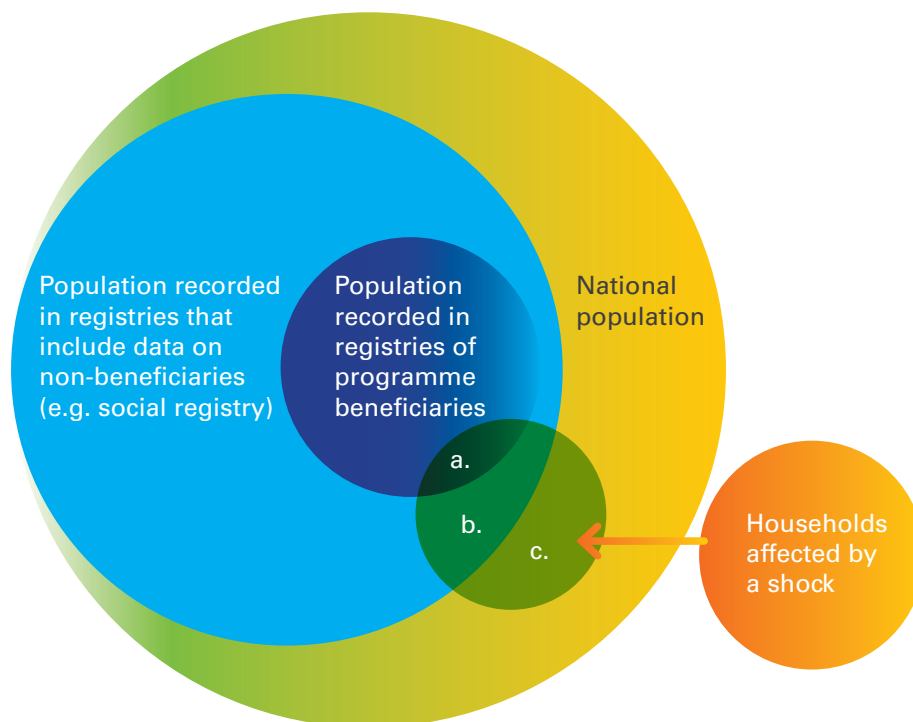
Solid social protection systems address all risks faced by individuals and households along their lifecycle, including natural hazards, economic crises, and conflict that also play a critical role in determining life outcomes. When shocks are recurrent, protracted or severe, they destabilize household economies, making a return to normal life particularly challenging. This progressive deterioration forces many parents/caregivers to make choices that are in direct conflict with children’s rights with long-term negative repercussions for children’s wellbeing (UNICEF, 2019c).

**Box 1 Covariate shocks and social protection in a post-COVID era**

The percentage of a population potentially hit by an external shock such as COVID-19 has shown to be large and approximates near all the population. In the typical pre-pandemic graph used to picture the population affected by a shock, the portion of the affected population is represented as small a, b and c

The green circle represents the set of people

or households presumed to be affected by a shock and thus, outlining the challenges to be faced by the social protection system when a shock materializes. The reality during the pandemic would be rather represented by a green circle almost the size of total population in most countries and a circle of the population recorded in [social] registries to be much smaller in many nations.



Source: de Neubourg et al., 2021a, based on UNICEF, 2019c.



The basic mechanisms that drive social protection systems are risk pooling and solidarity (de Neubourg et al., 2021a). They ensure that the financial risks associated with income loss are borne by all members of a pool and not by each contributor individually. While everybody is potentially vulnerable to risks and shocks, not everyone is subject to the same probability of a risk materializing or a shock arriving at any given moment in time. Equally, not everybody has the same degree of vulnerability, since some people can withstand a shock better than others.

Pre-crisis arrangements are critical determinants of the adequacy of social protection reactions to shocks. For a social protection system to react adequately at the time of a covariate shock, basic protocols and procedures that rule the pre-shock social protection system must work well when a shock strikes. This means that the design, delivery, and governance aspects should be well established and designed to be operative also in times of shocks. Among them, financing protocols are one of the most critical aspects to be developed allow an existing system to react relatively quickly even to a covariate shock.<sup>2</sup>

To support the effective management of disasters, social protection programmes must also be adequately informed by risk analysis, be sufficiently flexible to respond – both institutionally and through delivery systems – and have DRF instruments in place. The “maturity” of the pre-crisis social protection system is an important determinant of the adequacy of the social protection reactions to shocks. To utilize social protection programmes as part of a national disaster risk management (DRM) strategy, it is key to have strong government leadership, programme components that support the delivery of risk-informed SRSP programme information systems, delivery mechanisms as well as risk financing and institutions’ coordination and capacity.

### 2.1.1 Risk and beneficiary data and systems

Adequate coverage requires social protection responses to be aimed at those in need during the shock. This includes determining whether individuals, households and children in need of support are identified/covered by the pre-shock programme eligibility criteria and identification mechanisms, whether targeting mechanisms need to be revised to expand coverage, or whether entirely new programmes need to be introduced to fill the gap. Updated registries and data are necessary to quickly identify new beneficiaries, ordinarily not eligible to receive social protection benefits, in need of help post-disaster. These systems might also include targeting processes, registration and enrolment systems able to take action during shocks. A social protection system needs a solid evidence base as its foundation, able to assess different levels of risks and vulnerabilities. While many regular social protection programmes generally rely on poverty analysis, a SRSP programme also needs to consider disaster, climate risk and vulnerability information. Disaster risk analysis, including spatial data, can help identify which households should be targeted after a shock and where. Disaster information systems can also be used to develop ‘triggers’ for when SRSP programmes should respond. Rapid onset (flooding) and slow onset hazards (drought) will need different triggers as each can require a different approach to triggering action (Wilkinson et al., 2018). When combined with early warning systems, the data and analysis can be used to model the impact of shocks on households of different wealth groups/quintiles as well as predict and plan appropriate social protection responses to future hazards.

Benefit levels are adequate if existing transfer amounts are sufficient to cover the needs of the target population during crises as well. Otherwise, temporary or permanent increases in benefit levels (i.e., top-ups) may be necessary to support the changing needs during and after crisis periods.

<sup>2</sup> Collective financing, broad risk-pooling and rights-based entitlements are key principles in supporting effective access to social protection for all in a shock-responsive manner (ILO’s World SP Global Report 2021). The principles set out in international social security standards are more relevant than ever in making progress towards universal coverage, also during shocks.

## 2.1.2 Delivery systems

Delivery systems are the tools, processes and administrative means that a programme has of targeting, identifying, enrolling, reaching and continually interacting with its intended beneficiaries. These delivery systems are the way that the programme is implemented on the ground. While in 'normal' times, many of these delivery systems can take time to collect data, analyse, design ways to support and reach households, in periods of disaster these delivery systems need to respond far more flexibly and urgently to quickly and easily provide ex-ante and ex-post support to beneficiaries in risk-prone areas.

The ability of a social protection system to be shock responsive is determined by its coverage and strength of delivery systems (identification, registries, payments), all of which are financed, designed and developed before disasters occur.

The lack of accurate beneficiary data remains a major bottleneck for effective responses to disasters. Social protection responses to COVID-19 have provided a significant impetus to the development of data systems and propelled significant innovations in this regard. The question remains whether and how these systems will become more embedded in the overall disaster response system and other

national-level institutions (for instance, by aligning social and national registries).

In case of covariate shocks affecting a large proportion of the population simultaneously, so-called social registries are of limited value since they are highly targeted to the very poor or even the ultra-poor and are not able to recognize persons or households that became (temporary) poor due to the crisis. For identifying the groups of persons to be targeted with specific social protection instruments during periods of shocks wherein typically the reaction time needs to be short, it is crucially important that countries have comprehensive registries where all residents and the household compositions are registered. As the COVID-19 emergency demonstrated, social protection systems cannot respond to shocks if existing delivering systems are narrowly targeted and organized around complicated procedures and protocols to identify and reach their intended population(s).

The ability of delivery systems to be shock responsive requires multiple options to deliver payments to households, including electronic (bank account) transfers, as well as manual payments (through post offices) for those in remote areas rather than electronic if financial inclusion is limited. Although mobile money has made inroads in recent years, its use is still not widespread.



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Similarly, beneficiaries' awareness of clear rules for assistance can also provide predictability, by letting beneficiaries know when, how much and for how long post-disaster social protection benefits will be provided. Grievance mechanisms are key for (potential) beneficiaries to flag errors of exclusion and bottlenecks in delivery of benefits.

It is important to highlight such limitations in the design and implementation may reduce the effectiveness of SRSP more than its pre-arranged financing. Delays in response have been more related to problems in system design, such as beneficiary identification and registration as well as policy limitations, such as caps on the number of beneficiaries within social protection programmes. This is even the case in countries that have 'pre-arranged' financing.

Policy and programme design flexibility is fundamental. While protocols are important, the ability to establish or adapt programmes based on unexpected circumstances is also key. This includes the flexibility both to create new programmes and to tweak existing ones that are able to ease the administrative burdens of channelling cash during a crisis.

Having all these processes and tools in place to expand and increase delivery of support during disasters is essential to SRSP systems. As indicated earlier, ensuring there are channels or delivery mechanisms to deliver support to those in need is a critical part of SRSP.

### 2.1.3 Coordination and capacity

Typically, a social protection programme may work within one ministry, such as a Ministry of Labour and Social Affairs. However, a SRSP system requires that DRM and social protection institutions work together to maximize impacts and avoid duplication. This applies to government and non-government stakeholders working across the development-humanitarian spectrum. On one side, social protection agencies should be part of the institutional structure for emergency responses, while on the other the disaster response should be integrated into a contingency plan of a social protection programme.

A strong and robust coordinated process with political backing is a key tool for a coordinated response.

Coordination mechanisms vary in terms of degrees of decentralization and devolution, but often include coordination arrangements with line ministries, including social welfare ones that oversee social protection, and across levels of government. The scale and location of a disaster determines the administrative level at which the response is coordinated. During local emergencies, local DRM councils take the lead in preparing for, responding to and recovering from the effects of any disaster. In the case of larger-scale disasters, a state of emergency can be declared for a city, municipality, province or region, and ultimately support can be requested from national agencies.

An adaptive governance environment is necessary to enable all of these structures, processes and institutions to work together. The governance environment needs to be sufficiently adaptive to meet the demand for expanded social programmes and services, and to avoid administrative bottlenecks in the roll-out of interventions. Stakeholders' mandates, roles and responsibilities need to be clear. Political will with clear decision-making authority and the human and financial resources for implementation are essential. This includes clear lines of coordination with DRM and humanitarian action, ensuring complementarities both in reach and coverage, but also on the timeline of coverage. Early action and immediate responses through humanitarian action could be needed faster than longer-term benefits from social protection.

Ensuring that social protection is included as a specific strategy within the DRM strategy and the associated DRF strategy – ideally with details about coverage levels in the case of various disaster scenarios – is considered a good practice. However, there are still cases where the social protection system may not be appropriate for a humanitarian response (for example, where the government is party to a conflict or humanitarian principles cannot be upheld). Hence, there is strong rationale, in terms of longer-term sustainability, to avoid setting up completely parallel humanitarian programmes and systems (UNICEF, 2019c).

### 2.1.4 Financing

Good practice indicates that regular financing for multi-year inclusive social protection programmes is paid for out of one or a combination of sources, including tax revenues, reallocation of public expenditures, tackling illicit financial flows, tapping into reserves, borrowing or restructuring debt and adapting macroeconomic frameworks (UNESCAP, 2018).

Responding to covariate shocks requires a combination of expanding coverage, increasing the level of financial protection and range of services offered. To accommodate new populations and needs as a result of a shock, additional financial resources are required to flex and/or scale-up existing programmes, or to activate new emergency programmes that build on existing systems.

To fund the expansion of social protection programmes pre- and post-disaster, predictable and protected funding sources must be identified and secured before a crisis. Mobilizing funds after a disaster hits can slow the response time, leaving vulnerable people without sufficient support at a time when they need it most.

SRSP requires that adequate financing be established and committed in advance, so that finances can be released based on pre-agreed upon rules and response plans. The financing of a SRSP programme needs to be in addition to 'regular' social protection financing arrangements. Governments usually account for the latter through public financial management (PFM) cycles. Therefore, governments should think about how to fit DRF strategies within their broader PFM framework.

## 2.2 What is disaster risk financing?

Disaster risk financing can be defined as the deployment of financial tools and processes to mitigate the impacts of events, which have a negative effect on financial flows required to support an enterprise (UNESCAP, 2020).

Ex-ante ('before the event') financial instruments allow development agencies or governments to pre-commit funds in the event of a shock in a secure manner that would allow these resources to be disbursed rapidly under pre-agreed actions. This is in contrast to using traditional, ex-post ('after the event') funding channels, which can be unpredictable and ad hoc.

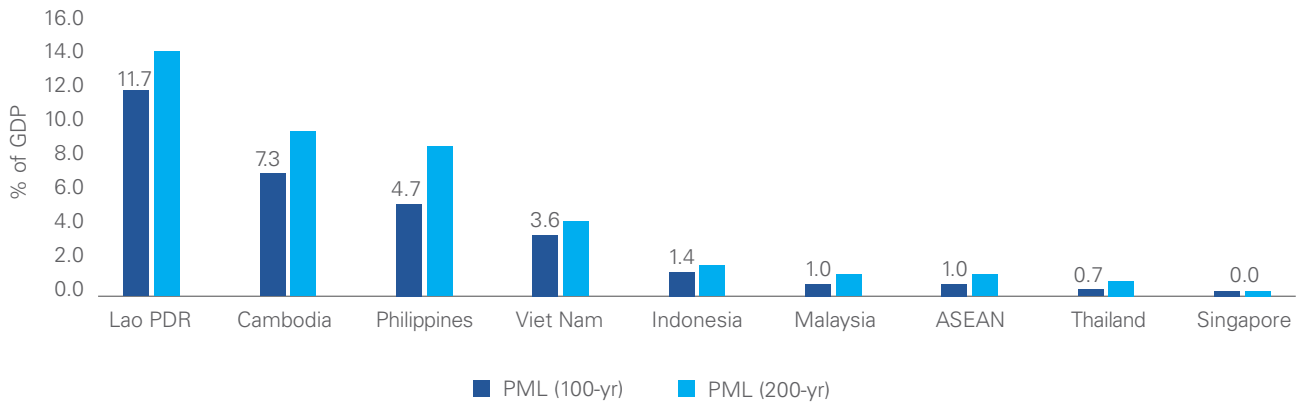
As a result of impacts of a shock, governments face particular fiscal risks. They include changes in the expected fiscal outcomes outlined in an economy's annual budget as a result of the disaster as well as contingent liabilities triggered when a potential event occurs, and which can be obligated either by law or by political, moral or other pressures (World Bank, 2019a). It is these fiscal risks and contingent liabilities that DRF aims to manage and mitigate.

### 2.2.1 What are the costs of shocks and disasters?

Historical records point to a global increase in the frequency and severity of natural disasters over the past few decades. Natural disasters in 2017 caused overall economic losses of US\$340 billion – the second-highest figure ever (Garand, 2019). Direct financial loss reached an average of US\$165 billion per year between 2007–2017, with losses exceeding US\$100 billion in six of those years. Further, actual losses are at least 50 per cent higher, once smaller disasters are included (UNDRR, 2016).

The short-term cost of some disaster events has amounted to more than 200 per cent of gross domestic product (GDP) in small island states and more than 25 per cent of GDP in middle-income countries, for example losses from the 2008–2011 drought in Kenya (Republic of Kenya, 2015). In industrialized economies, disasters have caused damages worth up to 20 per cent of GDP such as earthquakes in Chile and New Zealand in 2010 (OECD, 2014). In East Asia and Pacific, disasters and shocks place a significant fiscal burden on many governments (Figure 2).

**Figure 2** Estimated 100-year loss and 200-year Probable Maximum Loss (PML), as percentage of national GDP



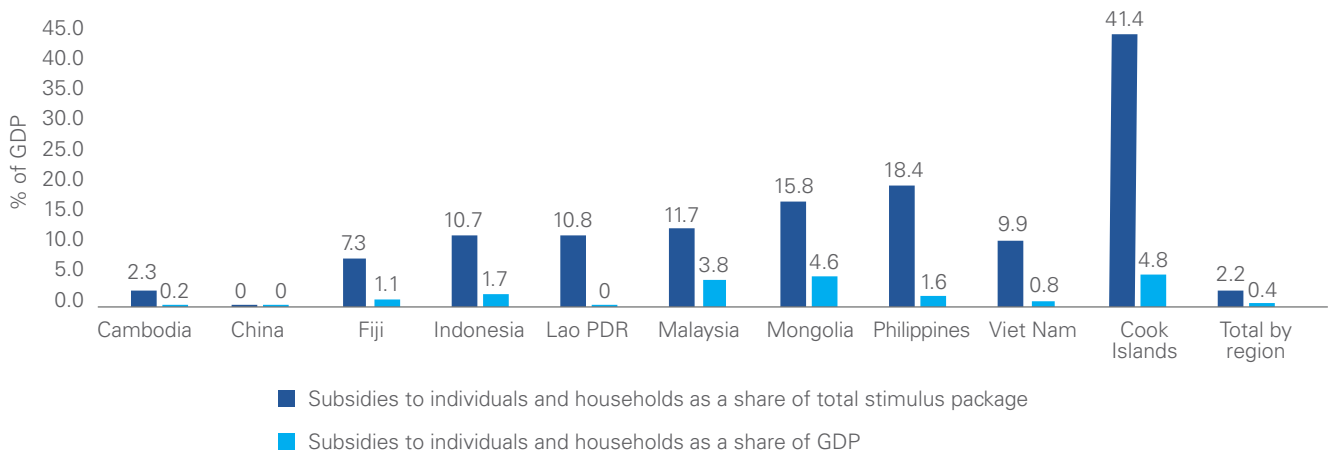
\* Note the exclusion of Myanmar and Brunei Darussalam due to data limitations.

Source: World Bank, 2012a.

In the medium to long terms, most studies found a negative relationship between the occurrence of shocks, disasters and economic growth. For example, the average disaster leads to a fall in growth of 1 per cent of GDP upon impact and a cumulative GDP loss of 2.6 per cent (von Peter et al, 2012). Disasters can reduce per capita GDP

by up to 6.8 per cent on impact (Felbermayr et al., 2014).<sup>3</sup> The unprecedented global crisis unfolded by the COVID-19 pandemic, considered a one-in-100-year event, has also increased the fiscal burden for countries to unseen levels, triggering unprecedented fiscal measures, including social protection, for large swaths of populations (Figure 3).

**Figure 3** Transfers to individuals and households as a share of the total COVID-19 stimulus package, and as a share of 2019 GDP



Source: De Neubourg et al., 2021b.

<sup>3</sup> Interestingly, as a percentage of GDP, fast-growing middle-income countries suffer the most, with average annual direct losses at 2.9 per cent of GDP, followed by low-income countries (1.3 per cent of GDP) and high-income countries (0.8 per cent of GDP) (Munich Re, 2013). Much of this trend is due to the rapid increase of assets in developing countries that do not take disaster risks into account during construction, leaving them vulnerable to natural hazards (World Bank, 2018b).

The costs caused by disasters are often and to a significant extent shouldered by governments, which are asked to provide financing for both explicit and implicit commitments related to disaster response. Furthermore, cost trends are likely to become more acute with climate change. By 2030, annual losses in Asia are expected to be over \$160 billion, which is close to 0.6 per cent of the region's GDP, up from 0.1 per cent in the 1970s (UNESCAP, 2020). Yet only 8 per cent of disaster losses are insured in the region. A large protection gap is growing as disaster losses increase. The economic costs of cascading hazards (natural and biological) and climate change could soon exceed total government spending in several countries. According to the latest calculations (UNESCAP, 2021), under the current pathway for climate change, the average costs to the economy for most of countries in the region will double as a minimum.

### 2.2.2 Who bears the costs of shocks and disasters?

Developing countries and low-income populations will feel the greatest effects – disaster impacts are inversely related to income and an economy's size. For example, Organisation for Economic Co-operation and Development (OECD) economies with lower GDP per capita suffer relatively more fatalities, while those with higher GDP per capita experience larger absolute costs but lower costs as a percentage of GDP, reducing their relative economic impact.

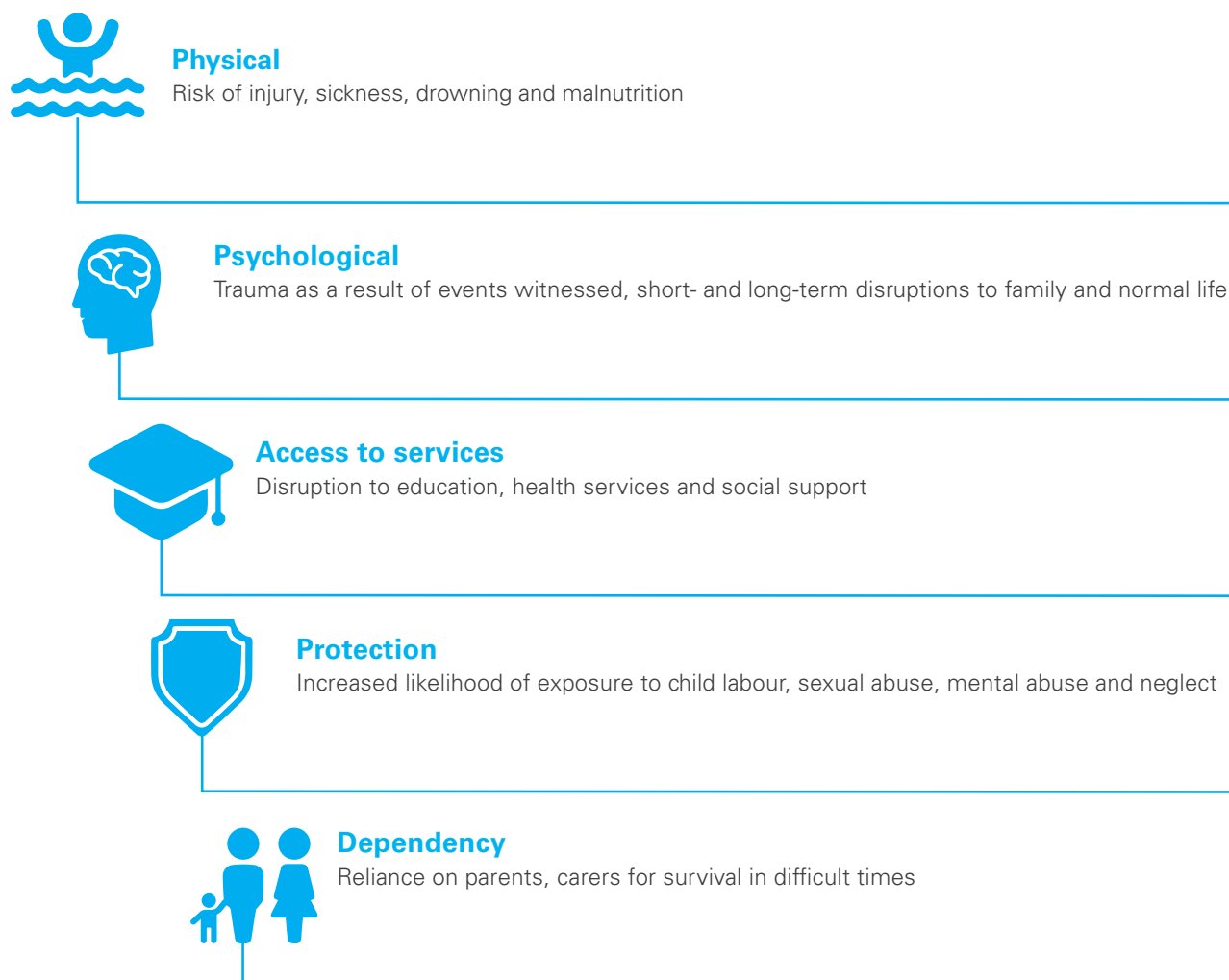
Disaster-inflicted costs are to a significant extent shouldered by governments, which are asked to provide financing for explicit and implicit commitments related to disaster responses. The primary losses that governments are exposed to are sovereign assets, such as infrastructure, which account for the majority of government spending in later disaster phases, such as recovery.

Businesses, farmers and households bear considerable costs caused by disasters. The 2010 earthquake in Chile caused US\$500 million in damages to property that was absorbed by

companies without insurance and the 2008 drought in Kenya resulted in US\$9.1 million of losses to livestock owners (Carter et al., 2015). When accounting for impacts on well-being, not simply economic losses, natural disasters cost the global economy US\$520 billion or 60 per cent more than usually reported (Hallegate et al., 2016). While poor people experience only 10 per cent of disaster asset losses, almost half of the impacts are on their well-being (Hallegate et al., 2017).

Within a household, the impacts of disaster can be distributed unevenly. For example, mortality rates as a result of disasters are higher among women, while negative impacts on nutrition and school performance disproportionately affect girls. Women and children often bear the brunt of both the direct and indirect impacts of disasters. Children are also indirectly affected by negative coping strategies adopted by their families. Most families adopt one or more coping strategies to mitigate the impact of those shocks (UNICEF, 2019a), exacerbating children's pre-existing vulnerabilities (Figure 4). But, these are not always successful and can have negative indirect effects on children, including: (i) reduced amounts or quality of food with lower nutrition values, (ii) reduced spending on education or healthcare, (iii) indebtedness due to loans that cannot be repaid and/or high interest rates, (iv) parental absences due to the need to work more or elsewhere and (v) migration taking children away from home.

For these reasons, DRF is widely channelled into three areas most directly affected by disasters and in need (Carter et al., 2015, OECD et al., 2019, UNESCAP 2019). These are: (i) sovereign assets, such as infrastructure under 'build back better' initiatives, which contribute to physical resilience and often assume the largest share of risk financing resources, (ii) the private sector (meso and micro-level farmers, fishermen, entrepreneurs), small- and medium-sized businesses whose financial resilience is strengthened by DRF and (iii) the poor(est) and vulnerable living in disaster-affected areas, those who may already be enrolled in existing social protection schemes, to whom socioeconomic resilience is essential.

**Figure 4** Sources of child vulnerability in emergencies

Source: UNICEF, 2019a.

### 2.2.3 What instruments are generally available for disaster risk financing?

If national resources are limited and financing options are not agreed upon and set up in advance, governments are left with a limited set of options in the aftermath of a disaster. Access to immediate liquidity has traditionally come from budget reallocation. Reallocation diverts funds from other government programmes with potentially negative impacts on long-term development programmes (see Box 2). In addition, the process often takes time, as it requires

an analysis of available resources as well as a certain level of consensus across affected line ministries. Alternatively, governments issue debt, but unexpected borrowing can derail progress toward debt targets (World Bank, 2016a). Knowing the cost of various sources of funds is critical to decide on economic efficiency and weigh it against the benefits of timely finance for the response. This knowledge is the basis for developing comprehensive disaster risk finance strategies that usually combine many funding sources to minimize costs and maximize benefits (World Bank, 2021).

## Box 2 The impact of budget reallocations

Budget reallocations are costly and difficult to track within disaster response expenditures. World Bank research in Albania set out to analyse the scale and incidence of budget reallocations during COVID-19, focusing on budget cuts and quantifying their impact provides key insights and a framework to move forward on making better decisions around disaster response spending.

There is little evidence to date about the cost of budget reallocations for disasters. There are many reasons for this, including challenges to track reallocations ex-post when the decisions about why and how these were made are already forgotten, and the detailed data is buried underneath project-level budget execution reports. While it is known that governments rely on budget reallocations to finance responses to major shocks and that these entail an opportunity cost in terms of returns foregone from delayed or cancelled spending, the size of these reallocations and their impact is largely unknown. It is also notoriously difficult to assign a value to public expenditure, even more so to public expenditure which did not happen.

Source: World Bank, 2021.

The more a government relies on budget reallocations, the more costly they are. This is because governments are strategic in choosing to cut the non-viable or lower priority spending first, but once these are exhausted, more difficult choices must be made.

Resilience budgeting is a novel budget formulation approach which tries to do this by specifying formalized criteria for reallocation and ex-ante agreement between line ministries and central finance agencies about their priorities. With such an approach the decision-making process about budget cuts can become more transparent, cost-effective, and quicker, while simultaneously providing line ministries with more predictability on in-year budget changes. Resilience budgeting should be couched as one component of a comprehensive disaster risk finance approach, which together would better enable governments to sustainably and timely meet expenditure demands in the wake of a disaster mitigating the impact on lives, livelihoods, and the economy.

Alternatively, financing a response can be through the humanitarian response system. International assistance is estimated to offset between 3 to 8 per cent of reported disaster losses globally (Gurenko, 2009). Much of this assistance is received in response to extreme catastrophic events, rather than recurrent ones. Typical surges in assistance are small relative to the size of the affected economy or the estimated direct economic damage (Becerra et al, 2010). Further, assistance is often late, unpredictable and under-funded.

Governments can increasingly choose from a menu of financial instruments and mechanisms that help address different risks. They range from recurrent to more rare events as well as different funding needs, from short-term emergency relief

to recovery and reconstruction. There are broadly three types of instruments that governments can use as shown in Figure 5:

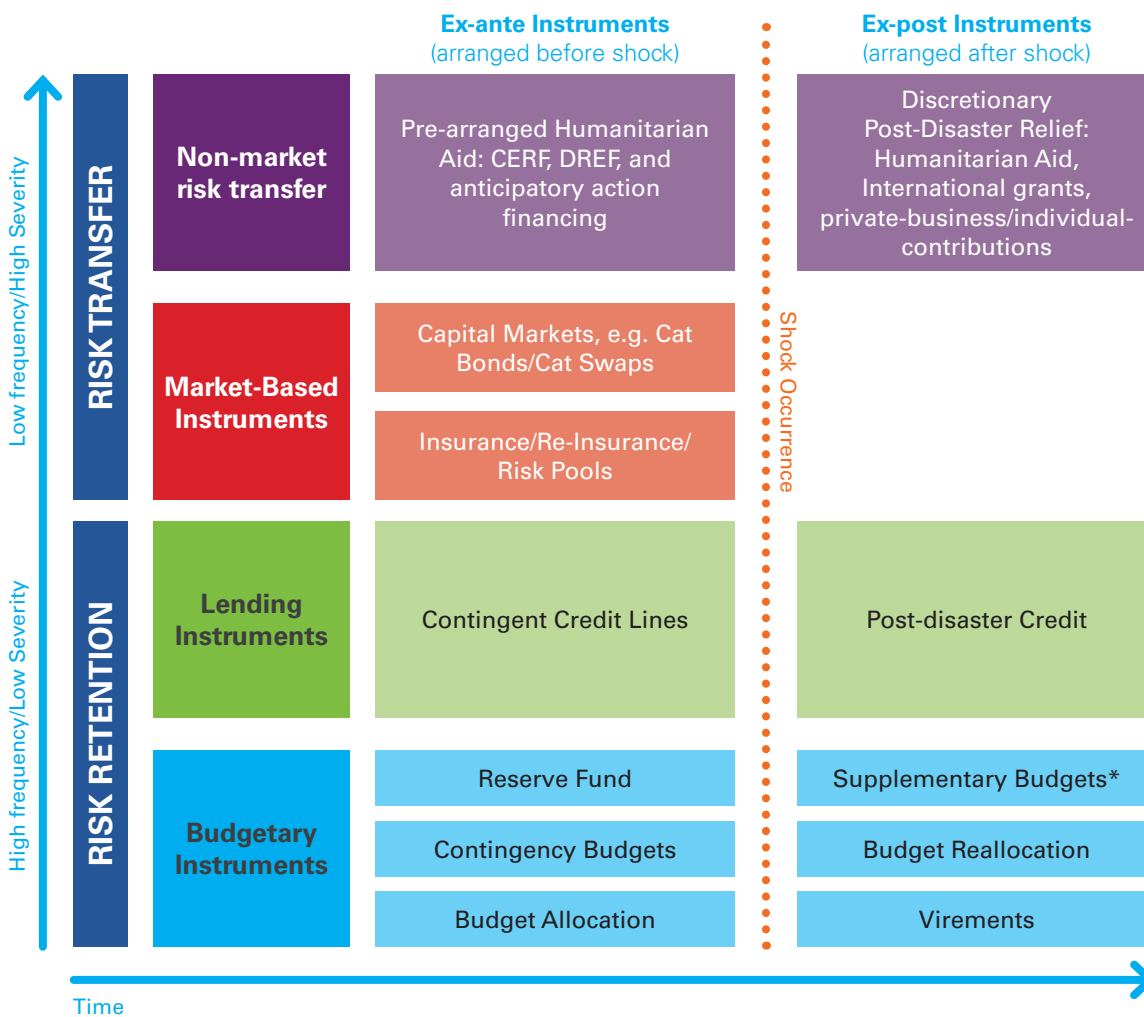
- Instruments that are **budgetary** in nature are typically used to respond to high frequency, low impact hazards. These instruments include contingency budgets, contingency reserves/funds and annual budget allocations and reallocations. They are used to finance relief, rehabilitation, reconstruction, and prevention activities for national emergencies and are made available from domestic resources. They can be held at different administrative levels (national or differing levels of local authority).



- Instruments that are activated on specific **contingencies** are typically used to respond to moderate frequency, moderate impact hazards. These instruments include contingency credits/loans. These financial instruments are designed to give countries access to liquidity immediately following an exogenous shock, such as a natural disaster. They are typically held at a national level.
- Instruments that **transfer risk** are typically used to respond to high impact, low frequency hazards. They are used in every sector of the economy and have growing relevance in development due to increased exposure to risks that result in economic

loss. A broad menu of underlying instruments, derivative contracts, insurance contracts and catastrophe bonds (CAT bonds) can be used to transfer the risk of specific meteorological or geological events (droughts, hurricanes, earthquakes, and floods) to actors in the market, such as insurance companies, reinsurance companies, banks, and investors willing to accept them. These market-based risk transfer products use scientific information and actuarial modelling to estimate losses that would be sustained due to a specific event and to “price” the risk (World Bank, 2016a). They are typically held at a national or regional level.

Figure 5 DRF instruments



\*Supplementary Budgets are funded by borrowing, tax increases, etc.

Source: Authors, based on Costella et al., 2021; World Bank, 2014; and Longhurst et al., 2021.

A growing number of governments have started to develop and implement financial protection strategies that help smooth fiscal shocks and avoid disruption of longer-term economic growth and fiscal objectives (World Bank, 2019b). These ‘disaster risk financing strategies’ seek to ensure the adequacy of financial resources to meet the costs of the full potential range of disaster events, with the overall goal of strengthening financial resilience within the population and economy.

The strategies are a critical component within broader DRM strategies aimed at reducing and managing risks, including through investments in risk prevention (OECD, 2015). The provision of accurate, accessible and transparent information on disaster risks is an essential precondition for these strategies (OECD, 2012). The strategies identify the sources of investments, how liabilities will be met and how any support to institutions, businesses and households will be delivered.

A critical part of the strategy development is to identify which instruments are best suited for the different kinds of climate and disaster risks. ‘Risk layering’ refers to the process of separating risk into tiers that allow for more efficient financing and management of risks (World Bank, 2012a). A risk-layering approach requires breaking disaster risk down according to the frequency of occurrence of different types of hazard events of varying severity and associated levels of loss and designing bundles of instruments targeting differentiated layers of risk.

The availability and assortment of instruments selected for a strategy depend on a range of factors. The most appropriate bundle of instruments depends on: (i) the scale of resources required at each layer of loss,

(ii) the speed with which funds are required, (iii) the marginal cost of each instrument, (iv) individual country circumstances, (v) the scale of potential events, (vi) government economic, fiscal, and monetary goals and objectives, (vii) access to international finance markets and (viii) the cost of borrowing (ADB, 2019a).

### 2.2.4 Disaster risk financing over phases of disasters

The volume of funding needed at different stages in response efforts changes over time. Relatively smaller costs are evident in the relief phase compared to reconstruction phase, for example, which may require substantial funding with costs spread over a long period of time. However, the critical dimension in the relief phase is the timeliness of funding: fast payment is fundamental to its value with economic analyses suggesting at least a four-to-one benefit of early action across a range of natural disasters (UNESCAP, 2020). Quick-disbursing financing instruments can reduce humanitarian impacts and save money by enabling rapid crisis response as well as relief efforts.

This recognition that early responses are not only more cost-effective, but also more impactful has led to the introduction of a range of new programmes, focusing on anticipatory disaster financing. These include the forecast-based financing (FbF) initiative, various crisis modifiers<sup>4</sup> and the START Fund. Under these programmes, financing is released based on forecasts of probable hazard impacts rather than realized ones with an early release of resources to fund activities to prepare and respond to likely disasters.

<sup>4</sup> Crisis modifiers are an instrument developed by USAID. They are designed to overcome a common problem in development programming – an inability of development projects to rapidly reallocate programme budgets once a risk is realized. Pre-planned development programmes typically do not have the flexibility to quickly reallocate funding to address spikes in need. Crisis modifiers are an important contribution to an emerging suite of risk financing options. If implemented effectively, a crisis modifier allows development agencies to respond quickly to anticipated or observed crises, while continuing to invest in projects that address the root causes of people’s vulnerability to shocks and stresses. For more information see also, Peters et al., 2017.

The speed and volume of resources needed will affect which instruments are most appropriate at different phases of the response. Ensuring that resources are available when they are needed is critically important. Ex-ante financing could be available within the response phase of a disaster and can continue to be made available through the recovery and reconstruction phases. However, ex-post financing is more limited with sector/programme contingency budgets and in-year reallocations available during the response phase, within the first three months of a disaster. New credit lines secured through international financial institutions or through the market would typically take at least four months before approval. Pursuing post-disaster financing through credit would mean it would only be available in recovery phases. Other forms of financing, such as realigning the capital budget, would typically take at least six months to formalize.

Disaster risk financing is one of the necessary, but not sufficient components for SRSP to

function effectively. Without appropriate DRF for SRSP interventions in each of the various stages of the disaster cycle, such as appropriate layers of financing, impacts will be blunted as programming may not achieve scale. What brings these two areas closer together is DRF solutions and SRSP both contribute to build a comprehensive approach to resilience of the poorest and most vulnerable. While social transfers contribute to the economic resilience of households, pre-arranged predictable funding adds to the financial resilience of not only households, but of whole communities.

Until now, the bulk of available evidence has focused on DRF instruments. These instruments are nonetheless, one more piece of a complex puzzle. Financing frameworks should interact with broader disaster risk management frameworks, as DRR does not work in isolation from early actions such as SRSP. Rather than focusing exclusively on risk layering, practitioners and policy-makers need to start thinking about risk ownership too.



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### 3 DEFINING A REGIONAL DRF AND SRSP WORKING FRAMEWORK

The type of covariate shock is of utmost relevance to the success of a response. Evidence highlights the need for thorough data and risk analytics to better understand the opportunities for financing and implementing SRSP. The risks and impacts associated with different types of covariate shocks vary. They can be localized (flooding), widespread (extreme temperatures), rapidly occurring (earthquake), evolve slowly over several months (drought) or have protracted impacts (a health shock such as COVID-19). Moreover, the ability to conduct an anticipatory response, act early or respond after a shock might also differ based on the type of hazard and its impacts.

Our analytical framework focuses on natural hazard-related shocks and, consequently, on covariate shocks that affect multiple people concurrently. While COVID-19 arises from a biological hazard, the focus is on the socioeconomic impacts of the containment measures that have been imposed, rather than the virus's public health consequences.

Mobilizing funds and effectively delivering them where and when they are most needed are cornerstones of effective early action and shock responses. The financing of effective early action and disaster responses through social protection involves adherence to some key principles:

- **Timely:** The release of financing and the delivery of response are swift and timely.
- **Appropriate:** Different forms of financing are aligned, integrated and coordinated in an intentional and coherent manner across types of interventions and over time.
- **Accessible:** Rules to release resources and deliver support are pre-agreed and understood before a shock or disaster, and the process for accessing resources is straightforward and administratively adequate.
- **Deliverable:** The capacity, infrastructure and enabling conditions are in place to deliver the necessary support. In this sense, the ability to deliver is as important as the financial arrangements themselves.
- **Risk-informed:** Objective and commonly agreed/understood data and information are used to make financing and programming decisions, based on an understanding of existing and future risks.
- **Predictable:** All stakeholders have confidence that the finance will be available on time and that the agreed actions will be adequately financed and implemented.

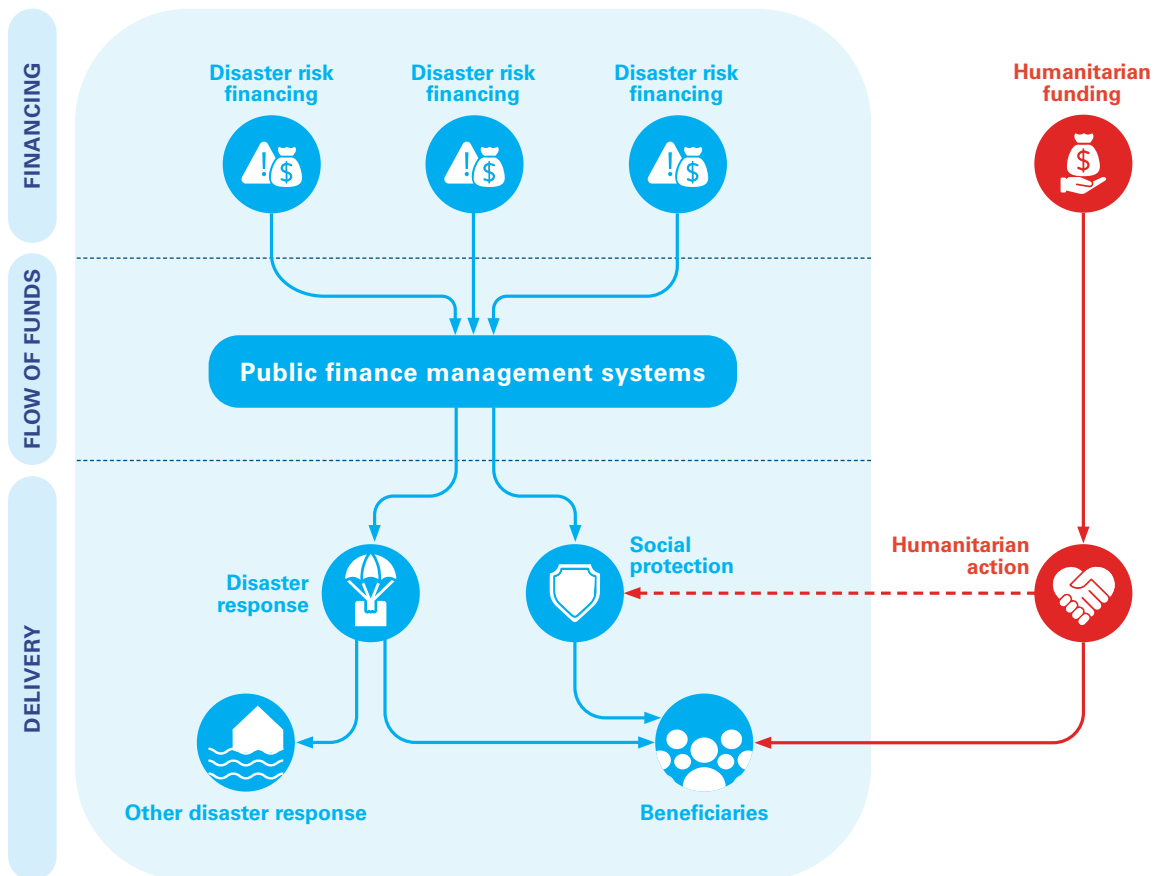
- **Equitable:** It is ensured that financing and delivery put people first and reach those who are most in need, including ensuring gender equity and social inclusion in any response.

The financing of SRSP is thus part of overall DRF, where the **financing, flow of funds** and **delivery** of benefits for a disaster response are closely linked (Figure 6). ‘Financing’ refers to the source of funding as well as the set of policies and technical arrangements that govern such financing. As such, key elements of the financing include a country’s DRM plan as well as a DRF strategy. ‘Flow of funds’ includes the channels through which the funding flows, but also the systems of checks, regulations, and policies that may enable such funding to reach its intended destination. This is the key function of the PFM system. If the pipe is broken or blocked, funding will never reach the tap. ‘Delivery’ – the tap – refers to the provision of the benefit – cash or in-kind – to the people and sectors that need it, including emergency response and SRSP, among others. The system is embedded in a policy and

institutional environment that determines, among other things, the way in which plans, strategies, and ad hoc measures are applied when disasters strike.

Humanitarian action and its financing are important, but funding almost always runs alongside the government’s system. The funding channels of the humanitarian system are often separate, and they rarely interact with a country’s PFM system during a crisis. Moreover, humanitarian funding is often not considered to be a predictable source of funding in a DRF plan, although, increasingly, there are exceptions: for example, when the funding is pre-arranged and secured around triggers. More recently, humanitarian action has been increasingly delivered using social protection systems. However, it is usually only aligned with social protection systems and is implemented separately. For those reasons, this study does not primarily consider humanitarian funding flows, except to the extent that experiences from the humanitarian sector provide lessons that can be applied more widely to nationally financed systems.

Figure 6 Analytical framework



Source: Authors.

### 3.1 Financing social protection: the role of DRF

Disaster risk financing (DRF) is the practice of arranging financing, developing policies and legal and institutional frameworks as well as building capacity in advance to ensure that funding is available and efficiently used for rapid response and recovery to address the economic costs of natural hazards (Cubas et al., 2020). A country's disaster financing, including its DRF strategy, is embedded in a country's legal, institutional and policy arrangements for DRM. Good DRF often takes into consideration a number of aspects, such as the sources and levels of risks, and the design of appropriate 'layers' of financing instruments for different types of risks, as well as the timelines of funding and its delivery, among other aspects.

When a DRF strategy exists, it should be the overarching policy that governs the financing of shock and disaster responses. Based on a comprehensive risk assessment, a DRF strategy should estimate the scale of funds needed; the sources, type and layering of financing instruments that can deliver such funding and the rules for releasing it, including the delivery channels. Thus, plans for delivery through SRSP should also be part of such strategies, including the triggers for delivering post-disaster social protection benefits (Cubas et al., 2020).

An analysis of risks and their associated impacts is central to any DRF strategy. Risk financing strategies differ based on the potential or realized impacts of a shock, which will determine the necessary speed, size and type of financial response. Disasters might be caused by natural hazards as well as man-made factors, including conflict, violence, civil unrest, and technological and financial factors. Probabilistic assessments of the frequency and severity of shocks and their potential fiscal costs, as well as actuarial analysis, help governments estimate risks and plan accordingly (Cervik et al., 2018). From the perspective of social protection, beyond estimating potential impacts, governments can also determine the amounts of funding needed to ensure households' consumption or income smoothing.

Financial instruments are types of finance, finance packages or products that are specifically designed to provide money for certain risks (Longhurst et al., 2021). They often include risk retention and risk transfer instruments. Risk retention instruments refer to those instruments where the risk remains on a country's balance sheets, such as budgetary reallocations (virements and supplementary budgets), contingency budgets, and dedicated emergency funds, as well as contingent financing, which consists mostly of disaster-triggered loans.<sup>5</sup> Risk transfer instruments refer to those instruments where the risk is transferred to a third party. The most common types of risk transfer instruments are what are often called market-based instruments, so called because the risk is transferred to the private sector in return for a risk premium, such as disaster insurance or catastrophe bonds. In our adapted framework in Figure 5, humanitarian aid is considered a de facto type of risk transfer, where the risk is transferred to the international aid system.

Humanitarian funding and other emergency grants are a key source of international financing that are becoming more predictable and reliable. Humanitarian funds and other emergency grants are somewhat uncertain in terms of size and availability, although a number of nascent coordination mechanisms enable some planning around this type of funding. For instance, coordinated appeals and pooled funds, such as the Central Emergency Response Fund (CERF) and the Disaster Relief Emergency Fund, which are types of funds that release immediate humanitarian financing through the United Nations and Red Cross/Red Crescent systems, respectively are examples of humanitarian funding that is established in advance. Anticipatory action, which so far has been funded exclusively from humanitarian sources and implemented by humanitarian actors, has added a degree of predictability to the funding of early actions, based on early action protocols linked to impacts on the ground and, ideally, to pre-specified budgets.

<sup>5</sup> For example, during COVID-19, many countries accessed emergency loans from the World Bank (World Bank, 2020e).



Finally, a discussion on financing sources might need to include climate financing, international funds, as well as increasing revenue from taxes and the expansion of contributory or hybrid (multi-tiered) social protection systems. It is crucial to integrate the climate dimension in the financing discussion. Recent developments and initiatives on climate risk financing overlap significantly with those from the DRF spectrum. Despite climate risk financing having a broader focus, tools are equally applicable for social protection responses.

DRF instruments can be layered, depending both on the severity of risks as well as when the resources are expected to be needed in the disaster cycle. Risk retention should be opted for when a country faces high-frequency, low-severity events. For more severe events, risk transfer instruments established by governments in advance of any disaster may facilitate the mobilization of additional funds. In addition, DRF instruments can be layered based on the

timelines as regards when they are needed for disaster responses, from early or anticipatory action to long-term recovery. Speed matters, but not all resources are needed at once: while funding needs for emergency responses relating to infrastructure tend to be relatively small compared to long-term recovery and reconstruction costs, it might be crucial that the government has unfettered access to liquidity to quickly meet the need for immediate relief to victims (Ghesquiere et al., 2007).

Clear thresholds for action or triggers to release funding along clear timelines, either anticipatory or response, are important. Moreover, a clear allocation of roles, clarifying who is responsible for the risk – such as national/sub-national governments, donors – is essential to reduce response times and minimize political interference in the allocation of aid, as well as unnecessary post-humanitarian spending. Finally, clear pre-arranged disbursement channels can enable funding to reach beneficiaries more quickly.

## 3.2 Flow of funds: public finance management

How money or goods reach beneficiaries is as important as where the financing comes from (Cubas et al., 2020). PFM rules and processes are key to allocating funds to the right place. Governments require dedicated mechanisms and expertise to effectively allocate, disburse, and monitor preparedness, response, recovery and reconstruction funds. PFM refers to the laws, institutions, systems and processes by which public resources are planned and managed. It includes the management of revenue and expenditure: the mobilizing, allocating, executing and monitoring of it. PFM is often referred to as the ‘financial plumbing of the state’: pipes that ensure the delivery of public services based on three key principles: aggregate fiscal discipline, allocative efficiency and operational efficiency.

First, aggregate fiscal discipline – spending in line with available resources to ensure economic stability – is especially key in times of shocks. Disasters impact public financing by increasing spending and reducing the ability to collect tax, thus eroding fiscal discipline. A DRF strategy can help ease the impacts of a disaster on public financing, by ensuring advance planning is in place and providing liquidity in times of shocks.

Second, allocative efficiency – allocating scarce resources across areas effectively to achieve goals – might need a set of rules for disaster response that is different from non-crisis times. For instance, to finance high-frequency, low-severity events, governments typically utilize budgetary mechanisms – including budgetary reallocations, contingency budgets and dedicated emergency funds – whose use will usually be governed by a set of rules or regulations. If those rules are not aligned with the DRF strategy, in the event of a disaster they may not facilitate a fast response, delaying the onset of relief efforts.

Finally, operational efficiency – the effective use of funds in service delivery – will depend on the strength of the PFM system. The ability of the government to quickly push funds through government systems will be determined by the financial rules and regulations that govern public

expenditure, the internal control environment, reporting requirements, and the overall maturity of the PFM system. Understanding how PFM rules and regulations may or may not change under an emergency scenario is therefore vital for assessing preparedness and planning social protection responses to shocks.

Key PFM factors that have the potential to enable or block effective DRF include the following:

- **Pre-arranged disaster PFM mechanisms:** including legislation, such as budget laws and regulations established in advance to set out specific budgetary procedures that can be adopted in the context of a disaster, as well as who is responsible for implementing the different steps and for how long such procedures can be used. Examples include special dispensations on procurement rules, dropping the requirement to tender, or specific rules that connect DRF funds to specific expenditure programmes.
- **Budget flexibility:** budgetary laws and regulations also provide enough flexibility within the rules to allow for adjustments that enable a timely response. For instance, the relaxation of virement rules during a disaster, such as enabling the transfer of funds from the capital budget to the recurrent budget. This is especially important for countries that rely on risk retention DRF mechanisms with internal processes to ‘unlock’ resources.
- **Expenditure controls:** to balance the demands of an urgent and timely response with the need for a high degree of transparency and accountability, given that emergency situations offer an opportunity for funds mismanagement. Ideally, countries will have adaptable expenditure management processes that can fast-track priority spending items without bypassing established controls: for instance, creating a mechanism to prioritize payments for emergency relief programmes if faced with a temporary cash crunch.



- Expenditure reporting:** tracking, accounting and reporting expenditure incurred during disaster relief is important to ensure the provision of up-to-date information to decision-makers on the progress of implementation and what remedial action may be required. Accurate data also help to quantify future fiscal risks better, to enable better preparedness. Ideally, dedicated budget lines for emergency response should be used to facilitate the tracking of funds (to avoid reports aggregating data on emergency spending with non-emergency spending, as well retrospectively determining how much was spent and what was lost), although this is currently extremely rare.
- Fund disbursement tools:** such as specific tools and systems that can help speed-up payments, including cash advances to service delivery units, or the use of banking and/or mobile payment systems to transfer cash quickly to beneficiaries.



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### 3.3 Delivery: shock responsive social protection

Social protection is now considered to be a significant tool for addressing the impacts of shocks and disasters, including before they materialize. Social protection is the set of public actions that address both the absolute deprivation and vulnerabilities of the poorest, as well as the need of the currently non-poor for security in the face of shocks and lifecycle events. The concept of SRSP highlights the idea that benefits can be expanded, or aligned with emergency response, during shocks and disasters. Pre-existing social protection systems that cover the poor and vulnerable can help increase the speed and accuracy of response by scaling-up in times of shocks to expand benefits through existing programmes – increasing value to existing beneficiaries, adapting programme or benefit design, and/or expanding coverage to additional people, or through aligned emergency or humanitarian response programmes that eventually piggyback on those systems. This can provide efficiency gains from better use of scarce resources in times of shocks.

Social protection needs to be linked to the early action and DRM framework of a country and its financing. Risk financing mechanisms can work together with established social protection systems to rapidly help reach the poorest and most vulnerable following disaster shocks. This then leads to a need for ‘alignment’ between DRF mechanisms and social protection responses. In other words, social protection mechanisms form an essential part of, and need to be ‘integrated’ within, the design of DRF instruments.

Currently, the financing of national routine and SRSP in most low- and middle-income countries comes from a mix of domestic and donor funds, with low-income countries being particularly dependent on external donor funding for systems development and implementation due to their limited domestic resource mobilization

capacity (Longhurst et al., 2021). While social protection is one component of ODA financing, over the six years prior to COVID-19, only a little over 1 per cent of total ODA was disbursed in support of routine social protection provision, reaching a high point of US\$2.4 billion in 2019 (Ibid). It is not possible to estimate the proportion of development or humanitarian ODA allocated to SRSP due to limitations in the granularity of data collected by the OECD.

Importantly, while financing is key, effective SRSP also requires a number of systems and mechanisms to be in place. In addition to ensuring that the financing is available, adequate and effective SRSP will also need to put in place systems that reach those who are most impacted by a shock, and to provide adequate levels of support.

Finally, it is important to recognize that the financing of effective SRSP is closely linked to the political environment, and it is only one of the tools available to policy-makers and implementers. While strategies, policies and regulations can go a long way in adding predictability to responses, some level of discretionary power will remain with a country’s authorities. For that reason, issues such as political incentives and political will to set up a commensurate response might be key enablers of more effective action. Our study does not review these issues in depth, as they might need to be explored through more context-specific political economy analysis methods. In addition, it is important to note that SRSP is just one of the several tools available to deal with the impacts of shocks, and other mechanisms, such as humanitarian response instruments and financing, continue to be essential. Our analysis will not focus extensively on those additional instruments, except when some relevant experiences can provide guidance or lessons for SRSP.



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## 4 EXPERIENCES IN DRF AND SRSP

A recent study (Hill et al., 2021) examining the impact of pre-arranging finance for the support provided by governments, humanitarian agencies and NGOs in a disaster found little evidence that examines both how an intervention was financed

– ‘money in’ – and the impact it has – the impact of getting ‘money out’. Experiences in DRF and social protection can be described around some key interventions in East Asia and Pacific, as well as in other parts of the world.

### 4.1 Regional risk pools

Risk pools are emerging as a cost-effective vehicle to help countries access rapid financing for disaster responses. They allow countries to: (i) ‘pool’ common risks – come together to form a pool which can provide protection against risks, such as floods or earthquakes, (ii) retain some risk and (iii) transfer excess risk to the reinsurance and capital markets.

Risk pools provide financial efficiency in three ways:

- **Risk diversification:** covering the risks of each country in a pool requires much less capital than if each country was covered to the same level on an individual basis.
- **Joint reserves:** joint reserves allow the pool to retain a fraction of the risks and transfer excess risks to the reinsurance and capital markets.

- **Enabling larger reinsurance transaction size:** pooling creates larger transactions that are more attractive to global reinsurance and capital markets.

The emergence of risk pools over the last decade provides governments with access to a new set of instruments to enhance the financial management of climate and disaster risks.

Parametric insurance uses historic data and trends to quantify expected losses from a specific hazard occurring at specific severities. The insurance pays out to customers based on the occurrence of the hazard itself, rather than having to assess losses ex-post. The threshold, or trigger, for release of monies is the hazard occurring at pre-agreed levels of severity. Parametric insurance solutions allow for rapid payouts, providing liquidity within a couple of weeks to finance a rapid response.

The risk of funding a response to a disaster is thus shifted from the customer (governments), or in the case of micro-insurance (households) to the market – insurance and reinsurance companies. Even if a disaster event occurs after only one premium has been paid, the fully insured amount is still paid to the customer in full.

Regional risk pools promote political cooperation and public goods across the partners. Public goods generated include data infrastructure, risk models, and improved institutional capacity. The development and implementation of the pools also facilitates regional policy dialogue and improve collaboration between participating countries and development partners (World Bank, 2016a).

Risk pools are an efficient way for countries to manage low-frequency, high-impact risks that they cannot manage alone – they should form part of a financing strategy for SRSP. They can require participating countries to consider in advance how any proceeds released through the pool will be deployed, such as via social protection schemes. Risk pools can also help participating countries develop standardized contingency plans to enhance post-disaster delivery mechanisms and accountability as well as serve to promote financial and operational discipline of participating members as pools apply a systematic rules-based approach to the release of funds for post-disaster activities. They allow entry points for SRSP practitioners to support financial resilience in targeted ways across a group of countries.

Risk pools can also be a vehicle allowing member countries to negotiate with donor partners and secure funding that would not be available to individual countries, as donor partners are often keen to promote and support regional initiatives. Expertise in risk financing is highly specialized and scarce. It may be easier to establish this capacity in regional centres than individual countries. These sovereign catastrophe risk pools are evolving toward full-service regional platforms that could support the SRSP agenda of their members. Regional facilities can develop into regional centres of expertise to provide crucial capacity for risk management in vulnerable countries.

Despite its promising potential, there is evidence that quick disbursement of money at the sovereign level has not necessarily translated into quick support to households (Hill et al., 2021). African Risk Capacity's (ARC) experiences in Niger and Senegal highlight the obstacles presented by country public financial management and bureaucratic systems in transferring funds and more generally in implementing plans. In general, it is striking how little evidence there is globally on how payouts make their way through the budget system.

#### 4.1.1 Experiences from East Asia and Pacific

There are now two main risk pools in East Asia and Pacific: the Pacific Catastrophe Risk Insurance Company (PCRIC) and Southeast Asian Disaster Risk Insurance Facility (SEADRIF).

##### **The Pacific Catastrophe Risk Insurance Company**

pools catastrophe risks of five Pacific Island states (Cook Islands, Marshall Islands, Samoa, Tonga and Vanuatu). It was established in 2013. A total of US\$6.7 million has been paid out to countries to date, including US\$1.3 million to Tonga in response to Cyclone Ian in 2014 (Box 3) and US\$3.5 million in response to Cyclone Gita in 2018. Payments were made within 10 days of the event, providing a rapid-response financial instrument to support the government's ability to quickly respond when the disaster hit. The PCRIC is owned by a foundation whose governing body consists of participating countries and development partners (World Bank, 2019b).

PCRIC relies on the Pacific Risk Information System (PacRIS) to provide necessary meteorological data to trigger payouts. PacRIS is a regional geospatial data management platform that holds and monitors risk information from participating countries. PacRIS hosts the necessary data inputs to run the insurance model that underpins the PCRAFI. By combining the portfolio across multiple countries, there was a premium reduction in excess of 40 per cent, compared to the total cost of individual countries taking separate policies.

### Box 3 Pacific risk pool experience

**Tonga:** Tropical Cyclone Ian swept across Tonga on 11 January 2014, damaging 66 per cent of homes and losses up to 40 per cent in affected islands. Tonga was the first Pacific Island country to receive a payout under the PCRAFI Insurance Programme, totalling US\$1.3 million. The payout was made within 10 days of the event, and was among the first injections of cash, equal to half of Tonga's national budget reserves and was used by the government to assist in disaster response activities, including the distribution of relief goods to Ha'apai.

**Vanuatu:** On 13 March 2015, Tropical Cyclone Pam struck Vanuatu, triggering its parametric insurance policy for cyclone hazards. PCRAFI made a rapid disbursement, seven days after the cyclone made landfall, of US\$1.9 million to the government within seven days of the event. It provided a rapid cash injection to minimize the fiscal shock from the event. This amount was eight times the government's emergency provision. The PCRAFI payout, intended to help support emergency response services, enabled Vanuatu to respond quickly to affected populations, including the mobilization of nurses to impacted provinces.

Source: World Bank, 2019b.

**Southeast Asian Disaster Risk Insurance Facility** was agreed in December 2018 to launch as an ASEAN+3 initiative, with the goal of helping ASEAN member countries enhance financial resilience against disasters. SEADRIF's goal is to help ASEAN countries improve financial resilience to disasters, by increasing fiscal capacity to manage the financial impact of disasters and improving access to rapid response financing for emergency response. In addition, the ASEAN DRF and Insurance Phase 2 (ADRFI-2) plan of action seeks to equip member countries with risk management and risk transfer capabilities to become more resilient to financial losses caused by disasters (Olano, 2019). In the first phase, ADRFI focused on creating policies and institutional environments for risk financing and insurance in member countries. The second phase, which was launched in 2019, revolves around three main pillars: risk data -information and assessment, capacity building on DRF and risk advisory.

Unlike other regional risk pools, SEADRIF was designed from the outset as a platform, rather than merely a financing facility that evolved into a platform over time. As a platform, it offers members knowledge-sharing and technical assistance, including for insurance market development, as well as customized financial solutions to disaster shocks.

SEADRIF's regional risk pool covers Cambodia, Lao PDR and Myanmar. These countries were particularly concerned about the significant emergency response costs for floods. For example, the 2015 Myanmar floods displaced 1.6 million people and caused an estimated US\$1.5 billion in total losses and damages, while it is estimated that on average annually, the Government of Cambodia faces US\$54 million in emergency response costs. According to a post-disaster needs assessment led by the Government of Lao PDR, total damages from the 2018 floods alone was estimated at US\$371.5 million, equivalent to 2.1 per cent of the country's projected 2018 GDP, and 10.2 per cent of Lao PDR's annual budget in 2018.

Interestingly, the SEADRIF platform aims to be flexible in terms of its work and priorities. For example, at the direction of its members, SEADRIF can develop a range of programmes and products tailored to local realities, risk profiles and countries' desired financial protection goals. SEADRIF launched its first product in 2021, a catastrophe risk insurance issued to the Government of Lao PDR. Comprising both market-based parametric and finite risk components, the insurance provides the government with a three-year coverage against flood and other disaster risks. In the case of a qualifying disaster, the insurance will leverage international reinsurance market capacity to provide rapid liquidity to the insured country.

Discussions with SEADRIF and ASEAN middle-income countries – such as Indonesia, the Philippines, and Viet Nam – are ongoing regarding their participation. Analytical models indicate that if they joined the platform, a combined portfolio would generate a 38 per cent reduction in the one-in-200 year probably maximum loss, reducing the premiums further (World Bank, 2019a; SEADRIF, 2018).

**ASEAN Disaster Management and Emergency Relief (ADMER) Fund** is a nascent tool intended to serve as a pool of financial resources to provide emergency funds for emergency relief purposes, support the implementation of activities under the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), and provide necessary resources to support the operational activities of the AHA Centre.

**Country risk pools.** In 2017, the Philippines completed the first sovereign disaster risk transfer transaction in a developing/emerging economy in the region. It was the world’s first subnational risk insurance pool. The pool bundled together the typhoon risk of 25 provinces and transferred it to reinsurance markets, intermediated through the World Bank for the Philippines (World Bank, 2019a). This allowed for decentralized access to

financing in the event of a typhoon. The resources can be realized to regions that can then disburse to local government units. It remains unclear if there are requirements for how the resources will be spent, but experiences from Typhoon Haiyan in channelling resources through the national 4Ps social protection programme may be important. Bangladesh, Indonesia, India, Pakistan, Sri Lanka, Thailand, Viet Nam and others are now pursuing stand-alone solutions in addition to discussing pooled solutions (UNESCAP, 2020).

### 4.1.2 Experiences from other parts of the world

Between 2006–2016, 26 countries in two regions, Africa and the Caribbean and Central America, established regional risk pools. The countries in each region purchased ‘parametric catastrophe risk insurance’ to provide them with an overall cover of US\$870 million. Their aggregate premiums were US\$56.6 million (2016–2017). These pools have so far made payouts totalling just over US\$105 million (World Bank, 2016a).

**Caribbean Catastrophe Risk Insurance Facility (CCRIF)** has been in existence since 2007 and was the first sovereign catastrophe risk pool



established. As of 2016, 14 Caribbean countries participated in the pool. By 2018, CCRIF had made total payouts of US\$136.3 million, including more than \$50 million during the 2017 hurricane season. The latest pay out, US\$5.8 million to Barbados, was triggered by excess rainfall in October 2018. It works by combining the benefits of pooled reserves from participating countries with the financial capacity of international financial markets. It retains some of the risks transferred by participating countries through its own reserves and transfers some risks to reinsurance markets, which is cost-effective. This structure results in a particularly efficient risk financing instrument that provides participating nations with insurance policies at approximately half the price if approached the reinsurance industry individually.

**African Risk Capacity (ARC)** was launched in 2012 by the African Union and ARC Insurance Company Ltd and is overseen by its members, African Union member states and development partners. ARC issued its first insurance contracts in 2014. As of 2017, six West African countries had

policies in ARC: Burkina Faso, the Gambia, Mali, Mauritania, Niger, and Senegal. A total of US\$34.4 million has been paid out since its inception, including more than US\$26.3 million to Niger, Mauritania and Senegal in 2015 in response to drought. Through a pooled insurance model, ARC offers African countries competitive pricing for insurance products. In addition, an ARC agency acts as the capacity building, educational, and advocacy arm of ARC. Their engagement includes an extensive capacity building programme on the elements of early warning, risk modelling, disaster risk management and risk financing. The ARC programme seeks to create links to existing social protection programmes, improving ongoing nationwide resilience efforts. Through coverage from ARC insurance products, vulnerable households are protected from disaster risk through the receipt of timely support. ARC's in-house risk quantification platform, Africa RiskView (ARV), helps to illustrate and promote discussion of sovereign risk profiles and offers strategies to manage the identified risk (World Bank, 2016a).

#### Box 4 African risk capacity: the Malawi experience

Under the ARC programme, Malawi received a US\$8.1 million payout in 2017, having paid a premium of US\$4.7 million for drought coverage. The Government of Malawi used the funds to support more than 800,000 Malawians in the scaling-up of its social assistance programme and replenished its strategic grain reserves.

The Ministry of Finance received the ARC payout in the government account of the Reserve Bank of Malawi. ARC funds were then committed in two budget lines to the

Ministry of Agriculture, Irrigation and Water Development and to Department of Disaster Management Affairs, that accessed these budget lines through regular government processes, where funds are received following their official request to the Ministry of Finance in line with the Public Financial Management Act. The Treasury acted within one week of receiving the submitted request. Given the emergency situation, the Treasury prioritized these transactions to avoid bureaucratic delays, completing them within the standard transaction period to avoid delays.

Source: e-Pact, 2017.

**ARC-Replica** coverage was launched in late 2018. The programme is called “Replica Coverage” and allows international organizations and NGOs to access insurance if they can demonstrate harmonization between their response plans and governments’ pre-agreed disaster response plans. The replica insurance policy behaves in the same way as the government’s own insurance policy, so that any payouts occur at the same time and could directly fund coordinated responses. ARC-Replica uses the same parameters for making payments and premiums as the ARC, ensuring closer alignment between government and non-government stakeholders on key elements such as the timeliness of resources, transparency and accountability.

**UN’s Central Emergency Response Fund (CERF)**, while relatively small, should be considered as one instrument in the spectrum of DRF. The fund is increasingly financing emergency responses delivered through development programmes, including SRSP (see for example, the case of the anticipatory action pilot in the Philippines in Section 5). CERF was established in 2005 as the UN’s global emergency response fund. While not technically a regional pool, the CERF pools contributions from donors around the world into a single fund allowing humanitarian agencies to deliver assistance whenever and wherever crises hit. CERF has a US\$1 billion annual funding target and a US\$30 million loan facility to cover critical funding gaps in humanitarian operations (Pichon, 2019). The UN’s Emergency Relief Coordinator manages CERF on behalf of the UN Secretary-General and is supported by a CERF secretariat. In 2018, CERF allocated US\$500.5 million to support life-saving humanitarian action in 48 countries and territories.

## 4.2 Insurance

Micro and index-linked insurance is increasingly common and encouraged as part of a comprehensive risk financing approach to SRSP, especially for vulnerable (but not necessarily poor) smallholder farmers and those with livestock.

### 4.2.1 Experiences from East Asia and Pacific

The Philippines is perhaps the market that has advanced the insurance inclusion agenda the most. The insurance agenda is complemented by a comprehensive disaster risk management strategy that articulates insurance as a core element to the strategy. Typhoon Haiyan was the first time in a major disaster that the use of inclusive insurance covered a low-income population for part of a catastrophic event. There were 126,363 reported microinsurance claims as a result of the typhoon, which amounted to US\$12 million. The average payout to each smallholder farmer and fisher was US\$108 (Swiderek et al., 2015).

In 2017, the Government Service Insurance System (GSIS) Programme in the Philippines was established. It provides the local currency equivalent of US\$206 million in coverage on a parametric basis against losses to national government assets from major typhoons and earthquakes. It also covered 25 participating provinces against losses from major typhoons. GSIS is a government-owned insurance agency (UNESCAP, 2020).

Weather-based index insurance has started to expand across the region, including for drought in China and other agricultural insurance programmes (including for crops and livestock) that have been or continue to be in place in Bangladesh, Indonesia, Mongolia, the Philippines, Thailand and Viet Nam, amongst others. These programmes vary widely in scope, form and degrees of success. In the ASEAN sub-region, Viet Nam has moved the furthest towards introducing agricultural insurance, albeit with mixed success.



### 4.2.2. Experiences from other parts of the world.

The **Component for the Attention of Natural Disasters (CADENA)** programme was launched in 2003 by the Mexican federal government in partnership with the 32 Mexican states, targeting 4.5 million smallholder farmers. CADENA's goal is to provide relief to smallholder farmers when crop failures occur, but in a way that makes government expenditures more predictable. While individual farmers are not insured directly, State governments receive indemnity payments and distribute them to affected farmers.

CADENA uses macro-level climate catastrophe agricultural index products to provide a social safety net for small subsistence farmers for whom commercial crop insurance is not necessarily an appropriate or cost-effective mechanism. The federal government promotes the use of insurance by subsidizing up to 90 per cent of

premium payments paid by State governments, while gradually reducing the percentage of funds it contributes to ex-post relief.

CADENA now utilizes weather index insurance for a variety of hazards in addition to drought, as well as area-based yield index insurance that provides payment when the average yield in an area, as determined by a random sample, falls below a threshold. CADENA also offers traditional and remote sensing index insurance for livestock. A recent evaluation of CADENA found that: (i) payments from weather index insurance allowed farmers to cultivate a larger land area in the season following a weather shock, (ii) households in municipalities receiving payment appeared to have larger per capita expenditures and income in the subsequent year and (iii) while the cost of insurance appeared to be higher relative to the payouts, the benefits exceeded the costs for a substantial range of outcomes.



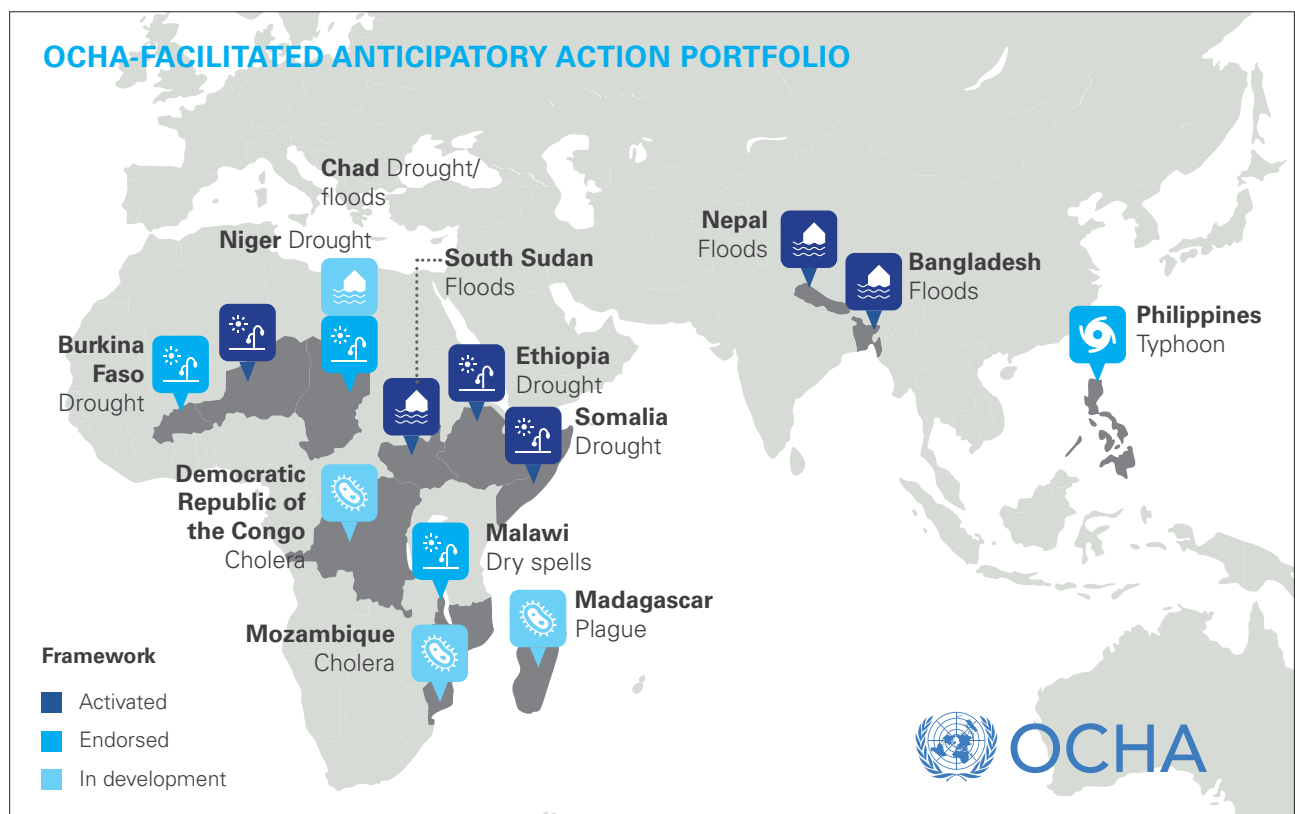
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### 4.3 Anticipatory disaster financing

Since 2008, there has been increasing interest in exploring how to more effectively (and systematically) respond to a forecast, rather than the occurrence of a disaster. This stems from the realization that many of the most devastating natural disasters in recent years were forecasted before they struck and hence action could have been taken to reduce impacts before the hazard event itself.

This resonates strongly with the SRSP agenda, with its emphasis on early action, early warning and disaster analysis. There is an increasing number of instruments or programmes exploring ‘how to’ respond to forecasting, including the Forecast-based Financing programme and the START Fund, although none are operating at scale. The addition of CERF’s anticipatory action pilots (Figure 7) has increased the financing options for SRSP.

Figure 7 CERF anticipatory action pilots



Source: OCHA, 2022a. Retrieved on 12 December 2022.

Anticipatory action (AA), also known as forecast-based financing (FbF), was initiated under a German Red Cross/IFRC programme that enables access to funding for early action and preparedness for response, based on in-depth forecast and risk analysis. A key element of AA is that the allocation of financial resources is agreed in advance, together with the specific forecast threshold that triggers the release of those resources for the implementation of early actions. This means that AA has three components:

- **Triggers:** Based on detailed risk analysis of relevant natural hazards, impact assessments of past events and vulnerability data, “danger levels” for a particular region are identified. Then, a forecast trigger is selected that will give advance notice before the “danger level” is reached.
- **Selection of actions:** The pre-determined package of support that will be provided at the time of a triggering forecast to reduce the humanitarian impact of the event.
- **Financing mechanism:** IFRC’s Disaster Relief Emergency Fund, which has a proven track record of managing multi-donor funds, acts as an ex-ante financing instrument that automatically allocates funding once a forecast reaches a pre-agreed danger level. This will enable the effective implementation of early actions. Funds can be authorized and released within 24 hours. A dedicated ‘window’ of the Disaster Relief Emergency Fund, with a balance of approximately CHF16 million in 2018, manages the FbF.

These three components are summarized in early action protocols, prepared by National Red Cross and Red Crescent Societies. The protocols serve as action guidelines that delineate roles

and responsibilities for quick action when a trigger is reached. The protocols are agreed by a technical committee that includes scientists, humanitarian actors and local authorities and a clear commitment of implementation established among the involved parties. Since the German Red Cross/IFRC programme commenced its AA, a number of other agencies – such as the Food and Agricultural Organization (FAO) and World Food Programme (WFP) – have adopted similar protocols and facilities. They all operate in a similar way, with a dedicated financing facility that can fund small-scale responses through their respective projects.

There are a number of AA pilots on-going and initial results seem promising. For example, in Bangladesh, an emergency cash transfer was made with a seven to 10-day advance warning of riverine flooding. The pilot in Bangladesh suggests there has been improved food security, reduced lending costs and lower anxiety/depression among those taking early action before disasters (Tanner et al., 2019). The Mongolia pilot included two emergency cash transfers made by the Red Cross and FAO to herding families in anticipation of extreme winter conditions or Dzud (harsh winter) in 2018. Based on the forecasts, resources were released to poor herders, which allowed them to take pre-agreed, preventative action to save their herds. Thanks to these early actions, for every US\$1 FAO spent, herders saw benefits of US\$7.1 per household in avoided losses and added benefits (FAO, 2018). While important lessons have emerged from these initiatives (Box 5), the outcomes and additionality of the AA instrument have yet to be comprehensively assessed.

### Box 5 Emerging lessons on AA

- An AA mechanism needs to be closely coordinated between humanitarian stakeholders and national authorities to ensure ownership.
- Responsibility for technical and financial coordination and sustainability of AA must be clear from the outset and based on comparative advantage, capacity and access to resources.
- An AA mechanism must be dynamic, so it can be improved based on robust evidence.
- AA requires iterative processes to understand risks, forecast skills, evidence of the effectiveness of early actions, among other elements.
- AA must be free from political manipulation by donors or national governments to retain its function as a robust, science-based and effective ex-ante mechanism for resource allocation.
- The risk of 'acting in vain' is a major perceived barrier to scaling-up AA. Taking early action when forecasts prove inaccurate has potential implications for accountability and perceived misallocation of limited resources. Although, if targeted at poor groups, actions could anyway help to enhance resilience.
- Institutional incentives and finance are still skewed towards emergency relief/ traditional means of financing. Post-disaster response is seen as more visible and defensible, forming a barrier to early actions.
- Adequate disaster risk information/ meteorological data sensing must be in place for forecasting to realize its potential.

Despite its level of infancy, there is a strong desire to institutionalize forecast-based financing in humanitarian and government risk-financing mechanisms. The process of developing the protocols with agreed actions and costs will certainly increase confidence in these mechanisms. However, more work needs to be done to identify and understand the incentives and interests of all relevant stakeholders if AA is to become standard practice (Tanner et al., 2019). There could be a role for AA in resourcing SRSP.

#### 4.3.1 Experiences from East Asia and Pacific

In September 2011, the Philippines became the first ASEAN country to take out a stand-alone

disaster contingency financing loan, for US\$450 million, from the World Bank. The World Bank's development policy loan facility contained a catastrophe deferred drawdown option (CAT DDO), which had been launched in 2008. CAT DDO's offer a source of immediate post-disaster liquidity to serve as 'bridge' financing while other resources are mobilized. The 2011 CAT DDO was triggered following Tropical Storm Sendon. Within two days of the storm, the government was able to access US\$500 million through the mechanism (Rahman, 2016). As contingency credits are released into general treasury accounts, it is not possible to identify where the resources were spent, given the multitude of demands placed on government expenditure at that time, but the potential benefits to SRSP are clear.

### 4.3.2 Experiences from other parts of the world

Start Fund Anticipation Window was established in 2014 and was one of the first pooled funds to be activated on the basis of a forecast. This multi-donor pooled fund is managed exclusively by and for NGOs. Through the window, 40 NGOs can apply for resources to assist communities prepare when they see a crisis coming and mitigate the predicted impacts. Since its inception in 2014, the Fund has responded to 415 crises in 71 countries, reaching 23 million people with an amount disbursed of £96.6 million. In 2019 alone, the fund disbursed £18.1 million to support responses in 37 countries, reaching 4.2 million people.

Start Ready is Start Network's newest financial mechanism which provides funding at scale for predictable crises worldwide. Since 2021, Start Ready uses best practices from the insurance and financial sectors, and the latest advancements in climate science, to protect up to three times as many people as traditional humanitarian funding, against predictable crises. Funding will be disbursed based on the prediction of a climate shock, using live data and scientific modelling. The countries, and events include for the first time Southeast Asia: The Philippines (cyclones), Bangladesh (flood), Pakistan (heatwaves, flood and drought), The Democratic Republic of the Congo (flood), Senegal (drought), Zimbabwe (drought).

## 4.4 Shock-responsive social protection

There is growing evidence that, during disasters, the consumption needs and productivity of poor and vulnerable groups can be cost-effectively protected through scalable social protection programmes and insurance schemes.

There are some preconditions to using social protection schemes as part of a disaster response. The most obvious is that there needs to be a pre-existing social protection scheme with programme infrastructure to build on. So, while scalable social protection schemes have shown potential to channel financing to those in need and the use of risk financing tools to support such programmes has proven effective in marrying global risk market capacity with budget stability amongst developing countries (UNESCAP, 2020), until countries' social protection systems are sufficiently strong they may be overwhelmed when a disaster hits.

Nonetheless, the global body of evidence remains relatively thin although there is significant international focus on this, given the debates and advances made in DRF, as well as the constraints in the international humanitarian field. On the one hand, there is little evidence of the impact of pre-arranged finance for publicly provided disaster response. A large part of the challenge has been the inability to show how the financing

provided by DRF instruments in a disaster allows quicker, more effective support to affected people, and that this made a positive difference in their lives (Hill et al., 2021). On the other hand, while there is considerable evidence that cash transfers do help households to manage shock, the evidence is predominantly for the impact of regular cash transfers, not cash transfers that have been provided in response to a disaster (Ibid).

Clear pre-arranged disbursement channels for delivering funds directly to the most affected households are a growing priority for many countries. These channels must include SRSP programmes. Once a government explicitly agrees to directly provide support to vulnerable households through such a programme, and once the trigger and coverage are determined, the Ministry of Finance can start quantifying the risks and contingent liabilities. The rules for scaling-up can then be directly linked to payouts from financial instruments, so payouts directly match the costs of emergency transfers.

By assuming this responsibility and utilizing social protection in this way, governments provide a form of insurance to those exposed and vulnerable to climate change, but unable to access market-based insurance themselves.

### 4.4.1 Experiences from East Asia and Pacific

**Philippines:** On 8 November 2013, one of the strongest typhoons ever recorded, Typhoon Yolanda – internationally referred to as Typhoon Haiyan – struck the Philippines, with severe human and economic consequences. In response to Yolanda, the Department of Social Welfare and Development (DSWD) implemented a variety of social protection and social welfare programmes to meet the multiple and changing needs of affected. These programmes can be broadly grouped into the following categories: distribution of in-kind relief items, cash transfers, shelter, and community-driven development. Most prominently, DSWD used its national conditional cash transfer programme, ‘the 4Ps’, to spearhead a response.

Upon the declaration of a “state of calamity”, the requirement for beneficiaries to comply with the conditions of the 4Ps programme was waived by DSWD in affected geographical areas for a set period of time. This made the 4Ps’ cash grants unconditional at a time when conditions would have been hard or impossible to meet. Financial resources were made partly available from reallocations as well as from drawing down on National Disaster Fund, the locally held LGU Disaster Funds, and humanitarian and development partner support. Through the pre-existing 4Ps system, DSWD was able to release a total of P550.5 million (US\$12.5 million) to disaster-affected 4Ps beneficiaries between November 2013 and February 2014, just three months after the disaster struck.

In addition, the WFP and UNICEF piggybacked on the national household targeting system

and the 4Ps delivery system to deliver additional emergency cash transfers to affected households, funded through CERF amongst others. WFP and UNICEF ‘topped up’ the usual amount delivered by DSWD to 4Ps households in affected areas, effectively scaling-up the 4Ps grant amount during a time of increased need for affected beneficiaries.

This was a pragmatic and replicable practice. It illustrated, for the first time in the region, the potential efficiency gains for humanitarian agencies and targeted beneficiaries of delivering post-disaster grants through a national cash transfer programme to pre-targeted poor and vulnerable households. Overall, the available evidence shows that scaling-up the 4Ps through the emergency cash transfer presented an efficient channel for emergency assistance to a cohort of those affected, without impacting negatively on channels necessary to reach the wider population. Challenges mostly stemmed from a lack of prior experience and preparedness (Smith et al., 2017).

**Fiji:** In February 2016, Tropical Cyclone Winston caused damage equivalent to 19 per cent of Fiji’s GDP, if environmental damage is included, and losses equivalent to 17 per cent of GDP (ADB 2019b). The government decided to use its existing social protection system to provide additional assistance to the most vulnerable, as a key component of its disaster response (Table 1). The government financed its initial relief and rehabilitation expenditures by reallocating budgeted resources from lower-priority expenditures. This provided the government with the flexibility of implementing programmes of its choice, such as the social protection programmes, through its existing structures. As a result, relief efforts were well targeted and coordinated, with strong government leadership.

**Table 1** Fiji's post-tropical cyclone Winston social protection interventions

Programme	Number of Beneficiaries (Households)	Duration	Budget (FJ\$ million)
Social Welfare Top-up Payments	43,897	3 months (March-May 2016)	19.9
Food Voucher Programme	44,169	2 months (May-June 2016)	4.6
Housing Programme	30,369	June 2016 – onwards	70
Fiji National Provident Fund (FNPF)	170,000	2 months (March-April 2016)	250.2
<b>Total</b>			<b>344.7</b>

Source: Fiji Post Disaster Needs Assessment Tropical Cyclone Winston, 2016; Mansur et al., 2017.

Four weeks into the disaster, the government had disbursed FJ\$19.9 million (US\$9.4 million) using the existing social assistance schemes, notably the Poverty Benefit Scheme to efficiently disburse cash to vulnerable groups and inject much needed cash into the economy. This meant that at least 75 per cent of households enrolled into social assistance schemes had received 'top-up' payments. The cash top-up payments were intended to help people meet immediate expenses following Tropical Cyclone Winston and were provided to all existing beneficiaries, irrespective of whether they resided in the affected areas or not.

The response to Tropical Cyclone Winston through scaling-up of Fiji's Poverty Benefit Scheme reduced the impacts on poor people by 20 per cent, with a benefit-cost ratio of 4. Notwithstanding these and other notable impacts of the rapid delivery of social assistance, an ex-post assessment (Mansur et al., 2017) showed the serious unintended consequences of the response over the long run. In particular, the long-term implications of the withdrawal of FJ\$250.2 million (US\$116.4 million) from the National Provident Fund (FNPF). It was the first time the

fund had allowed members to make maximum withdrawals from their pension funds capped at 30 per cent. As a consequence, members will receive reduced pensions in the future, while many others will not be able to access any further funds in case of future emergencies.

This same strategy was followed by most Latin American countries to counter COVID-19. With the exception of Uruguay, other nations permitted the early withdrawal of pension funds to mitigate effects of the pandemic in 2020. Some organizations such as the International Federation of Pension Funds Administrators (FIAP, 2020) raised concerns on the increasingly spread practice, alerting of the irreparable harm to workers' pensions in the long run. Such a strategy led to a significant reduction in worker coverage and in pension amounts the system could provide, which is diametrically opposed to the intended purpose of reforms that seek to increase pension savings. On the other hand, the State will need to finance all or a significant part of pensions of a growing number of workers who withdrew savings early, putting the sustainability of the system and integrity of savings at risk.

#### 4.4.2 Experiences from other parts of the world

Senegal and Tanzania have dramatically scaled-up coverage of flagship programmes, and in Ethiopia in 2011 the Productive Safety Net Programme (PSNP) expanded its coverage from 6.5 million to 9.6 million people in response to drought conditions (Tanner et al., 2019). According to the World Bank, better scalability of social protection in developing countries would generate US\$13 billion in annual benefit on average.

##### **Kenya's Hunger Safety Net Programme (HSNP).**

The most recent and well-studied, programme on SRSP is the Hunger Safety Net Programme in Kenya. Its northern regions and, in particular, the four counties along the border with Ethiopia are arid with fragile livelihoods barely supported by pastoral livestock and subject to frequent droughts. Food insecurity is chronic. The HSNP has been developed over the past decade to address this need by making regular cash transfers to more than 100,000 households: all of whom registered in the programme, underwent regular assessments of their poverty level, and set up a bank account to which the cash transfer could be made.

More recently, HSNP has included an index-based emergency payment mechanism to enable additional households to receive cash payments if drought conditions are revealed through a satellite-based vegetation index. Such households must already be registered and able to accept cash transfers. The scope of the emergency payments is dictated by both the poverty level of the household – so those closest to the poverty threshold level to qualify for regular cash transfers receive emergency support first – and the magnitude and spatial extent of the drought – as

measured objectively through the vegetation index at the sub-county level.

The scalability element of the HSNP provides a financing challenge. Cash transfers are made bi-monthly, totalling US\$5 million for every payment period. On average, emergency payments add an additional US\$1 million, but historically have reached as high as US\$7.5 million in any single two-month period. That said, in many two-month periods, no emergency payment is needed. Because speed of payment is a critical element of the HSNP emergency scalability mechanism, funds for emergency payments need to be readily available. However, holding and managing a contingency budget to cover potential scalability needs is politically challenging and can be expensive due to the high opportunity cost of those funds in a development context.

As HSNP was originally funded from a development partner project, financing challenges were manageable with the transition into a budgeted programme. HSNP uses Kenya's National Drought Emergency Fund (NDEF) to channel resources and attempt to manage this budget volatility. However, HSNP is also in discussion with ARC regarding an innovative mechanism that would displace all budget volatility from the scalability element of HSNP to global risk markets (World Bank, 2019b). It would be packaged such that payments from the markets, triggered by a parametric insurance policy, would always and exactly match the emergency cash transfer needs of the programme, occurring within the required timeframe. Based on the known appetite of global risk markets for parametric risk, ARC estimates that the marginal cost of risk transfer would be lower than any other risk financing mechanism.



**Mexico's disaster fund (FONDEN)** is an example of a dedicated disaster reserve fund. In case of disaster, it provides the 32 Mexican states and federal agencies with necessary resources to cover losses and damages, whose magnitude exceeds their financial capacity. The fund is mandated to finance emergency assistance, post-disaster recovery and reconstruction of public infrastructure, and rehabilitation and reconstruction of low-income housing (World Bank, 2012b). FONDEN is governed by standardized rules of operation and support other government disaster risk management initiatives, such as development of the government's national "MX Contingency Plan".

Post-disaster assistance through FONDEN is available only if an emergency has been officially declared, if the disaster has been scientifically confirmed, and if a damage assessment has been carried out – this is usually done jointly

by central and subnational governments. On 7 and 19 September 2017, Mexico experienced two large earthquakes with more than 12 million people directly affected. These earthquakes qualified for support and triggered the actions in the MX contingency plan to be implemented.

As a result, the now defunct Prospera programme, once the country's largest social protection programmes before it was abolished by the government in 2019 after 21 years, was able to expand horizontally by temporarily increasing the size of the beneficiary caseload in affected areas. It did this by using the social registry to target 2.8 million households registered, but not enrolled in the 'normal' programme, as well as opening enrolment for new households. Prospera also expanded vertically by suspending conditions and re-introducing beneficiaries that had their benefits suspended.





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## 5 REGIONAL EXPERIENCES IN DRF AND SRSP IN EAST ASIA AND PACIFIC

### 5.1 Regional context

Asia is exposed and vulnerable to a wide range of natural and manmade hazards. In many respects it is the global epicentre for disasters. According to OCHA, from 2014–2017, the whole region experienced 55 earthquakes, 217 storms and cyclones, and 236 cases of severe flooding. These disasters affected 650 million people and resulted in a death toll of nearly 33,000. In 2015, the Nepal earthquake killed more people than any other disaster (8,831). The drought in the Democratic People’s Republic of Korea affected the food security of more than 18 million. Four of the top five most disaster-hit countries were in Asia: China (26 disasters), India (19), the Philippines (15) and Indonesia (11). In terms of economic losses, China, India and Nepal were among the five worst-hit countries in the world (UNDRR, 2016).

The overall impact of disasters on economies and communities is still rising. They are further challenged by the impact of climate change. Exposure of populations and assets in the region has increased faster than vulnerability has decreased. Much of this is due to rapid economic

growth and private and public investments in hazardous areas such as tsunami- and cyclone-prone coasts, flood-exposed river basins and earthquake-prone cities. This has generated new risk and led to a steady rise in disaster losses with significant economic, social, health, cultural and environmental impacts across Asia.

By 2030, annual losses in Asia are expected to exceed US\$160 billion, close to 0.6 per cent of the region’s GDP, up from 0.1 per cent in the 1970s. Yet, only 8 per cent of disaster losses are insured in the region. A large protection gap is growing as disaster losses increase (UNESCAP, 2020).

In 2016, the Asia Regional Plan for implementing Sendai committed to promote national mechanisms for disaster risk transfer and insurance as appropriate, promote appropriate financial mechanisms to integrate disaster risk reduction considerations and measures to support the building of disaster-resilient communities and invest in the design and implementation of policies to ensure access to social safety nets.

EAP is the most disaster-prone region in the world and experiences high levels of exposure to hydrometeorological and geophysical hazards, a trend that will be exacerbated by climate change. This means the region has high levels of population and economic stock exposure.<sup>6</sup> During the past eight years, hydrometeorological hazards – floods, winds, storms, landslides, and droughts—have consistently accounted for at least 90 per cent of annual disasters. Floods, which affect all countries, persist as the most frequent type of shock in the region, while tropical cyclones are the most destructive in terms of total impact on the population and the economy. Underestimation of drought continues to be common due to its slow-onset nature: the complexity of drought makes it difficult to identify and monitor, and magnifies the threat of its cascading, wide-ranging, recurrent, and long-lasting effects (AHA Centre, 2020). With a changing climate, the region can expect more frequent and severe floods and tropical cyclones, as well as more intense, prolonged, and wider-ranging droughts.

In recent years the region has continued to experience a significant number of large disasters, but the vast majority of shocks are small or localized. Between 2016–2021, 21 disasters were declared as national emergencies in three countries alone: Indonesia, the Philippines, and Thailand. Two appeals were made for international humanitarian assistance: for earthquakes in 2016 and 2018 in Indonesia. Other notable disasters include significant flooding in 2018 in Lao PDR due to Typhoon ‘Bebinca’, earthquake damage in Indonesia in 2018 on Sulawesi, typhoons in the Philippines (Goni, Ulysess, and Molave) and Tropical Storm Linfa in Cambodia and Viet Nam in 2020 (EM-DAT, 2020). In the same period, many countries in the region experienced small, localized disasters, such as recurrent flooding, drought, and landslides. The Emergency Events Database (EM-DAT) recorded 299 natural disasters in Southeast Asia between 2016–2021, with 11,408 reported deaths and around 70 million affected people. The combined reported damages are estimated at US\$15 billion. There have been at least 15 landslide events in the region, including in Indonesia, Myanmar, and the Philippines, affecting 110,180 individuals, with estimated damages of US\$38 million.

### 5.1.1 Socioeconomic impacts of COVID-19 in the region

COVID-19 has impacted the region as a significant exogenous shock, affecting economic growth as well as public health. As with around the world, the health shock and resulting containment measures have translated into a significant economic shock for the entire region. Southeast Asia alone had recorded more than 4.8 million cases and 92,000 deaths due to COVID-19 by May 2021. Countries in the region, such as Cambodia and Thailand, were initially able to suppress large-scale community transmission, but subsequently saw significant rises in infection rates in 2021.

East Asian economies were already experiencing the negative effects of global trade tensions when the virus struck. In 2020, the ASEAN region experienced negative economic growth rates owing to the slow-down in global trade and COVID-19 containment measures, which saw countries imposing strict lockdowns and restricting tourism and trade. The pandemic negatively impacted the labour market: aggregate hours worked declined (employment rate and hours worked per employee). Unemployment also increased, and labour force participation declined (Ibid). The crisis is affecting all industries, but high-contact sectors (such as hospitality and retail) and non-teleworkable industries (such as mining, manufacturing, and construction) are experiencing the largest declines. These sectors have a larger share of low-skilled workers and those with lower earnings.

Although country-level poverty estimates are not available yet, poverty and inequality are both expected to rise as a result of COVID-19 and associated restrictions. In East Asia and Pacific, the poverty headcount is estimated to increase from 7.6 per cent in 2018 to 10.2 per cent calculated at US\$3.20 per day. This implies an increase in the absolute number of poor by 54 million in 2020 across East Asia and Pacific (Summer et al., 2020). The high level of informal employment and significant poverty in several ASEAN countries exacerbate the vulnerability of workers in the region. Furthermore, it is estimated that child poverty in the region will increase for the first time in 20 years, with an additional 22 million in East Asia and Pacific likely to fall into poverty as a result of COVID-19. Multiple dimensions of poverty and inequality, particularly in the areas of education, healthcare, nutrition and childcare, are also expected to (UNICEF, 2020b).

<sup>6</sup> We refer here to the multi-hazard exposure (MHE) methodology adopted by the AHA Centre (2020).

## 5.2 Recent regional experiences with SRSP delivery and financing

### 5.2.1 SRSP responses to recent non-COVID-19 shocks

The review of shock responses implemented by Southeast Asian countries between 2017–2020 reveals that, despite earlier experiences in the region, the growth of government-financed SRSP has been limited and delivery continues to be in the form of humanitarian assistance (see Figure 8). For instance, in Lao PDR, when significant flooding took place in 2018, there was no reported use of SRSP, as there was no existing social protection intervention or systems that could anchor such a response (IFRC, 2020). However, cash was used as a modality to support the humanitarian response targeting six of the hardest-hit districts, with the WFP implementing unconditional cash distributions, FAO distributing vouchers, and the United Nations Development Programme (UNDP) implementing conditional cash distributions – cash for work, all under the leadership of the Ministry of Labour and Social Welfare and the Ministry of Agriculture. Since then, a National Social Protection Strategy has

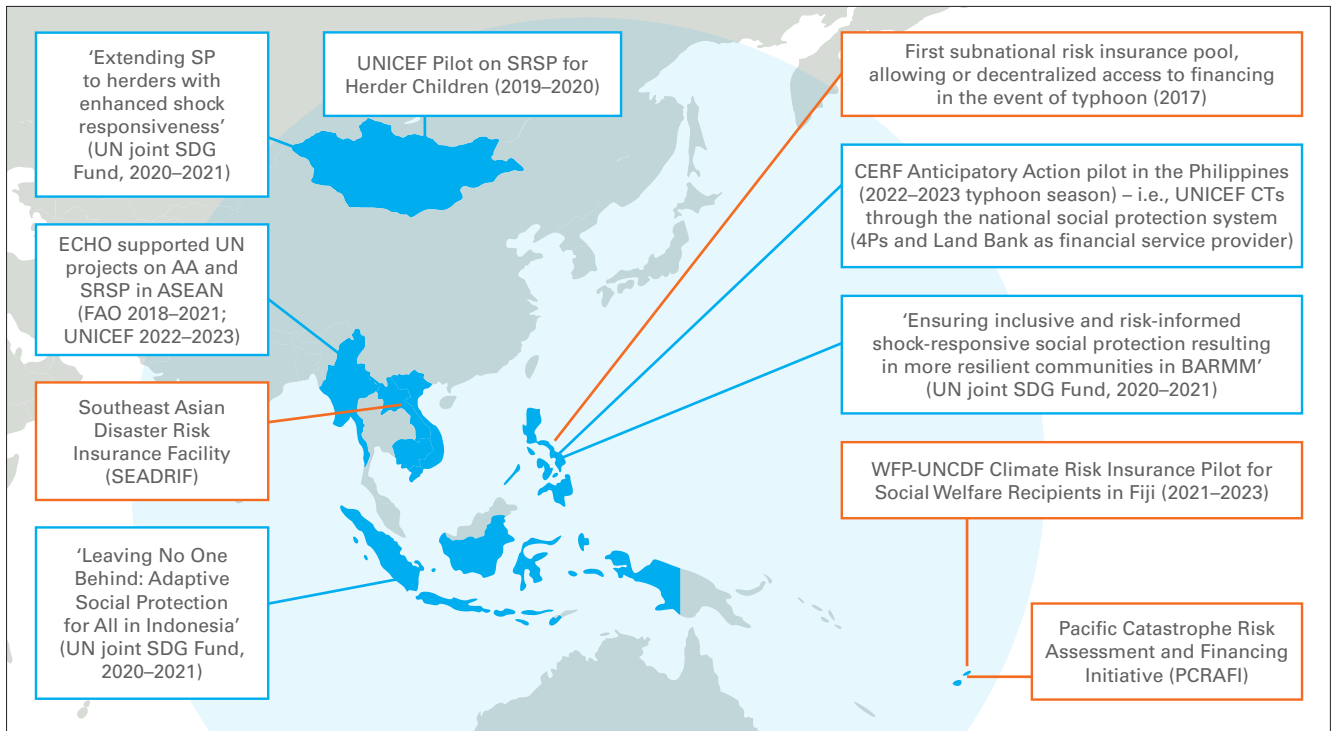
been endorsed and a first scheme that could potentially enable use of SRSP for floods in the future, the Mother and Early Childhood Grant, is being piloted.

Cambodia, Malaysia and Viet Nam also report no experience of using social protection programmes to respond to shocks, with the role of social protection agencies in disasters appearing to be limited. In Cambodia, in-kind emergency support was transferred through other mechanisms during recent shocks, such as through the Red Cross. In Malaysia, while there were no major disasters between 2017–2020, the government provided emergency food supplies, temporary shelters, and compensation for loss of income and belongings to those affected by seasonal floods, although there does not appear to have been any SRSP mechanism involved. In Viet Nam, where the government has provided emergency assistance in cash and kind, a support package to respond to floods in 2019 did not have any significant provisions for cash-based social protection measures.



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**Figure 8** Recent experiences and opportunities for leveraging financing tools and strategies for SRSP in EAP



■ DRF initiatives ■ SRSP initiatives

Source: Authors.

Countries with more advanced social protection systems, such as the Philippines and Indonesia, have been able to make more extensive use of SRSP approaches to respond to recent shocks. In the Philippines, the DSWD was the lead agency in the Food and Non-Food Item Cluster of the NDRRMC in response to the Taal volcano and typhoons in 2020. While the response was led primarily by LGUs, the DSWD provided emergency assistance in the form of additional

cash benefits to existing 4Ps beneficiaries using the existing programme infrastructure, registry and payment system, as well as the delivery of food and non-food items and other financial assistance to individuals, such as for burial, medical, and other needs.<sup>7</sup> Cash-for-work was also provided for 10 days as a disaster rehabilitation intervention, through the DSWD's Risk Resiliency Programme, since the area affected was part of this existing programme.

<sup>7</sup> In disaster-affected areas, LGUs compile lists of affected households eligible for support. 4Ps beneficiaries are supported through automatic top-ups.

**Box 6 Mainstreaming SRSP into the national social protection system in Mongolia**

A joint UN project, since 2019, has been supporting the expansion of social protection to herders with enhanced shock responsiveness, with an emphasis on reducing child and household poverty and promoting their well-being.

During the 2019–2020 harsh winter (called Dzud), UNICEF piloted an anticipatory SRSP initiative. Unlike similar previous initiatives, which used a FbF approach, cash transfers were to be channelled for the first time through the national social protection system – the Child Money Programme’s (CMP) implementation system. Previous humanitarian cash responses to Dzud in Mongolia had always been ad hoc, with unpredictable financing and using parallel implementation systems with limited government involvement. The CMP pilot was to demonstrate that the national social protection system could be used to respond to shocks faster and more cost-effectively than traditional humanitarian approaches and existing government social welfare programmes/systems – targeting via the CMP database, payment via banks – should

be leveraged and adjusted to respond to shocks.

SRSP measures were piloted in one province by topping-up the CMP, covering 2,730 children aged 0-5 years in December 2019 and about 6,800 children aged 0-5 years in February, March and April 2020 as an early response to Dzud. A post-distribution assessment showed that the delivery of cash transfers through the existing system was less costly in directly reaching the beneficiaries and meeting their needs. Nearly 80 per cent of households used the cash for their children, thanks to messaging to households about the purpose of the cash.

The valuable lessons drawn from the pilot proved instrumental in defining Mongolia’s response to COVID-19. In April 2020, the Government of Mongolia made a decision to increase the CMP’s monthly benefit to MNT100,000 (US\$38) per child – equivalent to an increase by MNT80,000 (US\$30), from the original MNT20,000 (US\$7.5) – for six months. This rise of 400 per cent relative to average pre-COVID levels was one of the highest increases in the world.

Source: UNICEF, 2019b.

In response to typhoons in 2020, more than 2.5 million 4Ps beneficiaries in disaster-affected areas were prioritized for provision of unconditional cash transfers through their Land Bank of the Philippines cash cards. Aside from the provision of relief aid, the DSWD provided psychosocial support and management of women and children-friendly spaces in evacuation centres, as well as a food-for-work programme in selected LGUs severely affected by Typhoon Ulysses.

The Department of Labour and Employment (DOLE), another key agency for social protection, also had a role in the response to natural disasters. In response to the Taal volcano eruption, DOLE implemented the existing Government Internship Programme in January 2020, whereby 6,000 internship slots were offered to residents affected by the calamity and who were eligible for the programme.

For those countries where SRSP approaches are utilized, recent experiences have highlighted major challenges in providing relief to affected areas, even when financing is available. In Indonesia, the Ministry of Social Affairs provided living allowances as part of the response to the 2018 Lombok earthquake and Central Sulawesi earthquake and tsunami, but the distribution faced significant delays. A recent qualitative study of the 2018 Central Sulawesi response found that the living allowances in three sub-districts took eight months to fully distribute, while distribution of the death compensation allowance was only completed in September 2020. In the case of the Lombok earthquake, which happened two months prior to the Sulawesi disaster, provision of the living support allowance was only completed in November 2020. This means disaster victims had to wait more than two years to receive assistance, despite the purpose of these programmes to cover

living expenses two months immediately after the disaster. Similar problems were experienced with rehabilitation and reconstruction grants and home-building funds. The rigid bureaucratic processes and lengthy identification and verification processes were the major factors contributing to delays in emergency responses. To speed-up assistance distribution in response to the 2019 Mount Sinabung eruptions, an attempt was made to streamline emergency response via the conditional cash transfer programme (PKH), which was expanded to include people who became poor due to the disaster. However, data validation and fulfilment of PKH requirements and documentation were problematic. Providing the required documentation was especially challenging when these documents were lost during the disaster. Thus, even when victims were able to meet PKH eligibility criteria, they could not be enrolled in PKH if they failed to provide required documentation.

Most countries have resorted to budget reallocation and other ex-post mechanisms for financing disaster response to recent shocks, including for SRSP. This is unsurprising, given the prevalent gap in DRF instruments that are planned for ex-ante. In Malaysia, the response to seasonal shocks in recent years has been financed from direct allocations from the Ministry of Finance. In Viet Nam, rice is provided from national reserve funds and emergency cash assistance is provided from local contingency funds. In the Philippines, a public expenditure review showed that a majority of post-disaster funding before 2020, across a number of national government agencies, came from budget reallocations. Despite having a DRF strategy in place, only one-third of expenditure came from pre-arranged sources of financing, and access to and execution of these funds was often delayed (World Bank, 2020b). However, contingency budgets have been important DRF instruments in recent disasters, such as in Indonesia and the Philippines.

### 5.2.2 SRSP responses to COVID-19

In comparison to other disasters, the social protection response to COVID-19 across the region was significant in scope. In Cambodia, the government launched a US\$1 billion emergency relief package, and on 26 June 2020 it officially

launched the COVID-19 Emergency Cash Transfer programme. This US\$300 million programme involved a six-fold expansion of coverage from the only cash transfer scheme in place pre-COVID.

In Thailand, according to the Budget Bureau, annual spending on social protection rose to US\$13.8 billion in FY 2021, up 10 per cent on the previous year. Thailand extended financial protection for health expenses, increased both the benefit levels and the duration of unemployment benefits, provided a wage subsidy, and initiated a scheme providing monthly benefits for three months to informal workers. The Cabinet approved a measure to supplement existing cash transfers to defined vulnerable groups, with an additional monthly payment of approximately US\$32 for three months. The recipients included all beneficiaries of the Child Support Grant (1.4 million children), in addition to beneficiaries of the Disability Grant (1.3 million people), Old-Age Allowance (4.1 million people) and State Welfare Card programme who had not received other COVID-19-related financial support (1.2 million people). In total, the 2020 cash transfers covered an estimated eight million families, with a total budget of US\$765 million. However, a new package launched in 2021 appears to provide less adequate benefits, in part because it does not account for the additional burden of families with children.

Not all countries have responded so significantly, and social protection measures have not always been a significant part of support packages. In Malaysia, while the government launched a key response, the direct fiscal stimulus – including the social protection response – was a relatively small component of the overall package. Most funds were instead to loan facilities and moratoriums, as well as to measures relating to the Employees Provident Fund – including allowing members to withdraw from their accounts (ILO/ESCAP, 2020). Lao PDR's COVID-19 responses included limited spending on social protection. In April 2020, the World Bank approved a US\$18 million loan for Lao PDR to respond to the pandemic, but no social protection measures were included. Unemployment insurance, the main instrument used by the government, has limited coverage applying only to those working in the formal sector, which is



smaller than the informal sector. In February 2021, the Lao Social Security Organization announced that one-time cash transfers totalling US\$1.8 million would be provided to workers in the garment industry to mitigate workers' lost income. The German Federal Ministry for Economic Cooperation and Development is funding the initiative, which was developed with technical support from ILO.

The COVID-19 social protection responses in EAP were swifter than to other shocks, although problems occurred (Figure 9). Overall, the speed of the response was fast, with an average of 19 days to start a response across the region: 39 days in Southeast and East Asia, and 10 days prior in the Pacific (UNICEF, 2020b).<sup>8</sup> The Government of Viet Nam's cash assistance package was announced in April 2020 and provided to people just one month later. However, it appears that informal workers, small businesses, and families with children faced difficulties accessing this package, due to complex registration and screening procedures (MOLISA and UNICEF, 2020). Although children were among the most affected by COVID-19 due to school closures and parents' lost income, the Vietnamese Government's responses mainly focused on other household members and did not consider the full scope of children's needs, leaving many of them

vulnerable – especially in anticipation of waves that could cause a further deterioration in the situation.

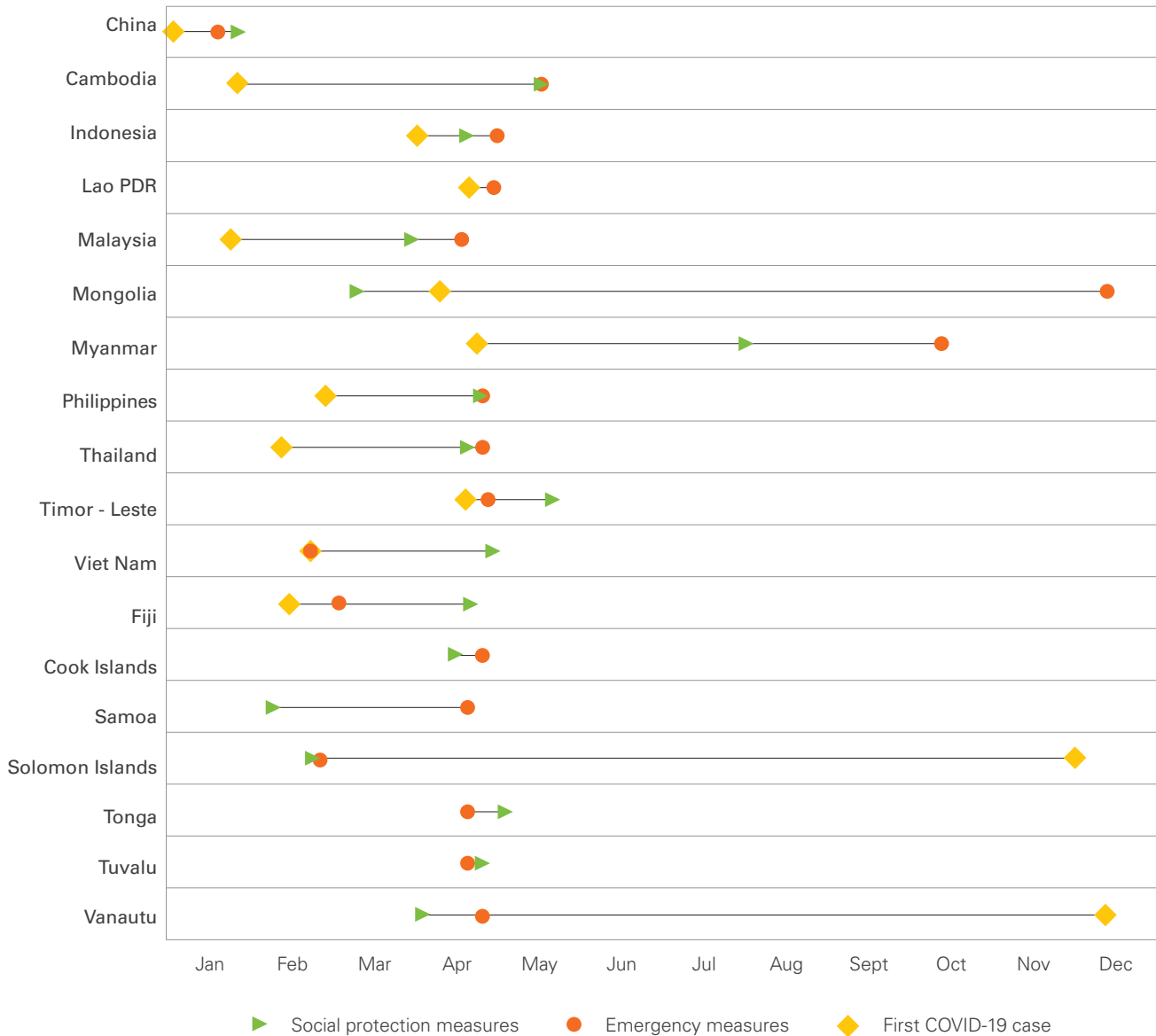
In Malaysia, the government's flagship social policy response, known as the Bantuan Prihatin Nasional, provided lump-sum payments to all families with a monthly income below US\$1,892, with transfer values varying according to pre-COVID-19 household income levels. However, with close to half of the workforce still informal, validation of identity and income were a significant challenge.

Most Pacific Island countries, except the Cook Islands and Fiji, have no comprehensive social protection system involving cash transfers that target children, women and vulnerable families. This means that social protection systems are limited in terms of positively impacting poor families and reducing poverty levels (UNICEF, 2020a). Despite most Pacific Island countries being classified as fragile States given their high vulnerability to natural disasters and climate change, many critical factors currently hinder the social protection agenda, such as the lack of political will, poor targeting and programme design, limited data, limited fiscal space and lack of capacity.

<sup>8</sup> Only a few countries in the Pacific had recorded community infections in 2020 (for example, French Polynesia, Guam and Mariana Islands), while most cases were detected in people arriving in the country. All Pacific countries enacted containment measures at the time, nonetheless. Thus, the average is based on either the number of days since the first case of COVID-19 or since the first pre-emptive emergency measures were enacted.



**Figure 9** Timeline of COVID-19 outbreak and response measures in EAP (2020)



Source: UNICEF, 2020b.

Indonesia’s response was large and was swiftly implemented, although existing social protection programmes’ rules limited scope for action. Social protection measures accounted for approximately one-third of the total support package, through a mixture of top-ups to existing programmes and the creation of new ones. The Indonesian Government quickly introduced plans to leverage PKH and Sembako for quick implementation. Within weeks, both programmes started to provide top-up benefits, while expanding the coverage to include more recipients. The most recent data available indicates that

by November 2020, two months prior to the end of the fiscal year, more than 80 per cent of additional funding for social protection was disbursed (World Bank, 2020d).

While these adaptations were significant, they were limited in scope by the regulations that govern how these programmes must operate. For instance, the number of additional beneficiaries receiving PKH is subject to a cap of 10 million households as a matter of policy, which meant the existing 9.2 million households could only be expanded by an additional

800,000 households. Given that changing such regulations would have required legislative approval, distributing assistance solely through existing programmes would have created major delays in delivery. To overcome this challenge, Indonesia introduced multiple new temporary social protection programmes – via presidential decree – to cover additional beneficiaries instead of channelling more funds through existing programmes.

Available evidence suggests that the social protection response to COVID-19 in Indonesia was relatively successful in mitigating the impact on vulnerable households, but some groups have been more difficult to reach. A recent assessment has shown that most vulnerable households (85.3 per cent) have received at least one form of social assistance, either in cash or in-kind. Among these, the poorest households have tended to receive the most assistance (Smeru, 2021). Simulations show that without the social assistance response, an additional 8.5 million people would have fallen into poverty in 2020. Nevertheless, it appears that many people not previously covered by the social assistance system who were affected by measures to contain COVID-19, such as informal workers in contact-intensive sectors, still faced challenges in accessing support. These findings highlight the need to sustain the coverage and adequacy of existing programmes, while strengthening mechanisms to identify and enrol the ‘new poor’.

The Philippines’ social protection response was large and driven by a package of support announced under the Bayanihan Acts (I and II), which governed overall spending in response to COVID-19 (see Box 7). After it was declared a national calamity, the response was implemented through the flexing of existing key social assistance schemes in the early stages of the pandemic, as well as using the identification and delivery system of existing schemes to provide support through new programmes. Bayanihan Act I mandated the provision of an emergency subsidy to around 18 million low-income households nationwide.<sup>9,10</sup> This resulted in the creation of the Emergency Subsidy Programme, under the umbrella

of which many Social Amelioration Programmes (SAPs) of various line agencies were placed, including programmes for the provision of outright cash assistance, zero-interest loans, and livelihood support – including cash-for-work – and wage subsidies (CPBRD, 2020).

Among existing DSWD social assistance schemes, adjustments were made to programme design to support beneficiaries. These adjustments included distributing double payments to avoid crowds of people, the Social Pension for Indigent Senior Citizens, providing monthly benefits to families through the Assistance in Crisis Situations for workers in relevant sectors, a payment of US\$522 if a death occurred from COVID-19, and waiving conditionalities for 4Ps beneficiaries. Conditionalities were waived on the health grant, but education grants were withheld as schools were closed. The national School-Based Feeding Programme was adapted from September 2020 onwards due to school closures, with take-home rations provided instead of hot meals in schools. The target beneficiaries were expanded from targeted kindergarten learners to all learners (DepEd, 2020).

In order to finance the responses to COVID-19, most countries had to put in place special regulations to enable large-scale borrowing. In April 2020 the Government of Viet Nam issued Resolution 42, which set out the aim of providing assistance to people affected by COVID-19 with a financial relief package amounting to more US\$2.6 billion, including support for about 20 million people through social assistance measures. In Malaysia, the government passed the Temporary Measures for Government Financing – Coronavirus Disease 2019 (COVID-19) – Act 2020 to increase the statutory debt ceiling from 55 per cent to 60 per cent of GDP. The government also repurposed funds allocated for other projects. In Philippines, the passage of Bayanihan legislation impacted the way in which existing DRF instruments could be used. As a unique calamity, COVID-19 also affected the use of QRF, which received a special provision to extend the use of these funds from one to two years until 2022.

<sup>9</sup> Households were interpreted as families by the DSWD for its SAP. One household can have multiple families.

<sup>10</sup> This was later increased to 23 million through the addition of five million ‘wait-listed families’.

### Box 7 Spending under Bayanihan I and II – the Philippines

In the Philippines, as elsewhere, 2020 was dominated by spending on addressing the impacts of COVID-19. This was done through the enactment of a four-pillar policy response and the passage of the Bayanihan laws, which underlined two fiscal stimulus packages: 'Bayanihan I' Act was signed into law in March and provided fiscal support of about 2.1 per cent of 2020's GDP. The second package, the 'Bayanihan II' Act, was signed into law in September and provided additional support equating to about 0.8 per cent of 2020's GDP. As at the end of December 2020, total disbursement under Bayanihan II amounted to 0.6 per cent of GDP. The use of the unspent Bayanihan II funds was extended to 30 June 2021. Current estimates suggest that 44 per cent of the package, or 1.9 per cent of 2019's GDP, has been used for health and social protection.

The first package, Bayanihan I Act, included the following: (1) a cash aid programme of about

Source: IMF policy tracker.

US\$4.2 billion (1.2 per cent of 2020 GDP) for more than 32 million low-income households, (2) social protection measures of US\$1.3 billion for vulnerable workers and micro-, small-, and medium-sized enterprises (MSMEs) – about 0.36 per cent of 2020's GDP, (3) COVID-19-related medical responses of US\$984 million (0.3 per cent of 2020's GDP) and (4) assistance to local governments of US\$743 million (0.2 per cent of 2020's GDP). Additionally, a credit guarantee programme for small businesses and support to the agriculture sector were allocated US\$2.4 billion, about 0.7 per cent of 2020's GDP. Financial assistance to affected MSMEs and vulnerable households was also provided through specialized microfinancing loans and loan restructuring.

The second package, the Bayanihan II Act, had a focus on vulnerable households and hard-hit sectors, such as agriculture, transportation and tourism, and also included capital injections into State-owned banks.

Overall, fiscal responses to COVID-19 have been financed from contingency budgets, budget reallocations, domestic borrowing, international borrowing, and private donations (humanitarian flows were not analysed). In Cambodia, COVID-19 social protection measures were financed from extraordinary funding allocated by the government, including budget reallocations and reprioritization of the 2020 and 2021 budgets, which include budget support from the European Union, concessional loans from the Asian Development Bank, and other sources. In Viet Nam, the COVID-19 response is financed by the government's budget, mainly from reserve and contingency funds, and reallocations from regular expenditures. In Malaysia, the government's COVID-19 package, including social protection measures, relied on ad hoc financing arrangements and regulations, including borrowing and reallocation of funds from projects, as well as non-fiscal measures, such as lowering the statutory reserve requirement level of commercial banks and reducing mandatory employee contributions.

In Indonesia, the government response to COVID-19 was facilitated by an exceptionally early budget revision process in April 2020, which normally takes place in June. This entailed a complex budget reallocation process involving all levels of government, to ensure that agencies implementing the response programmes, including social protection, received a higher share of the budget than previously planned. This was achieved by making cuts to 'non-priority' spending, capital expenditure and through additional borrowing. The budget revision was approved quickly and resulted in social protection spending rising by 0.4 percentage points to 1.6 per cent of GDP in 2020. Given that the country's GDP fell by two percentage points, the change for social protection spending represents a 25 per cent increase in nominal terms. While the budget revision process was ultimately successful, it still took several weeks to finalize and resulted in difficult cuts to budgets in important areas.

**Table 2** Indonesia's use of DRF mechanisms in response to recent disasters

Instrument	For COVID-19 response (2020)	For other disasters (2018–2020)
<b>Risk retention</b>		
<b>Disaster reserve fund</b>	No (not used for health emergencies)	Yes (e.g. Sulawesi and Lombok)
<b>Supplementary budget</b>	Yes (financed by debt)	No
<b>Budget reallocations</b>	Yes (major inter-agency effort)	Yes (MoSA intra-agency)
<b>Contingent credit</b>	No (did not exist at the time)	No (did not exist at the time)
<b>Risk transfer</b>		
<b>Asset insurance</b>	Not applicable	Yes (e.g. Jakarta floods in 2020)
<b>Livelihoods insurance</b>	Not applicable	Yes (crop failures due to disasters)
<b>Sovereign risk transfer</b>	Does not exist (yet)	Does not exist (yet)

Source: Authors.

The Philippines' fiscal response to COVID-19 was financed from budget reallocations and domestic borrowing, as well as international borrowing and private donations. The overall COVID-19 response was primarily supported by discontinued projects and activities, followed by non-utilized automatic appropriations, special purpose funds – such as the NDRRMF and regular agency budgets. The Department of Finance also secured a total of US\$13.9 billion in financing from international development

partners and commercial banks, as well as the issuance of U.S. dollar-denominated global bonds in April and December 2020. The DSWD's total funding was US\$4.4 billion, of which a majority came from discontinued projects and programmes (US\$4 billion). DOLE's total funding was US\$582 million, of which a majority also came from discontinued projects and programmes at US\$422 million. Table 3 summarizes the use of funding instruments per shock in the Philippines.

**Table 3** Philippines's use of DRF mechanisms in response to recent disasters

Instrument	For COVID-19 response (2020)	For natural disasters in 2020
<b>Risk transfer</b>		
Asset insurance	No	Unknown
<b>Risk retention</b>		
Contingent credit (donors)	Yes	Yes
Post-disaster credit	Yes	Unknown
Special purpose fund (reserve funds and contingency funds)	QRF Augmentation DSWD	NDRRMF releases financial assistance to selected LGUs affected by typhoons Quinta, Rolly, and Ulysses
Budget reallocations	Yes – through Bayanihan Law	None in DSWD or DOLE
Supplementary budgets	No	No

Source: Authors.

COVID-19 also led to flexibility in PFM rules in the Philippines. On Commission on Audit rules, the DSWD specifically requested the Commission on Audit to relax the rule requiring the submission of liquidation reports by the implementing agency prior to the subsequent transfer of funds, for the DSWD to proceed with distribution of the second tranche of SAP-EAP to eligible beneficiaries and to make payments in a timely manner. The commission allowed the DSWD to rely on a signed Barangay Council Resolution attesting that the identified beneficiaries were eligible and qualified under ministry rules in lieu of the liquidation report. However, the rules required all local chief executives to submit completed full liquidation reports within three months from the lifting of the declaration of the state of calamity. The actual transfer of funds to LGUs and disbursements were subject to regular post audits.

There is insufficient publicly available data to determine the original COVID-19 response disbursement targets for individual line agencies, and how they subsequently performed.

Under the first round of support (Bayanihan I), one of the key response programmes was SAP-Assistance to Individuals in Crisis Situations (SAP-AIC) implemented by the DSWD. The total programme target was 17,946,554 beneficiaries, of which 4.3 million were existing 4Ps recipients. By 2 April 2020, nine days after Congress approved the Bayanihan Act, 20.7 per cent of the total SAP-AICS beneficiaries had received their emergency subsidy. In contrast, 87 per cent of 4Ps beneficiaries had received payments. Overall, the quickest disbursement under this programme took place for existing social protection (4Ps) beneficiaries, due to a more established system for payments and distribution under the regular 4Ps programme (CPBRD, 2020). For DOLE, disbursements under the COVID-19 Adjustment Measures Programme (CAMP) were quick: as of 8 July 2020, a total of 657,201 workers/beneficiaries were reported to have received financial assistance amounting to US\$66,000, which translated into a 100 per cent utilization of the CAMP budgetary allocation (DOLE, 2020).

### 5.3 DRF Institutions, policy, and strategy

Most countries in the region have well-developed and institutionalized DRM strategies and plans, which have evolved as the region becomes more aware of its high climate and disaster risks. In the Philippines, DRM is deeply rooted in the country's governance, in recognition of the fact that disasters and climate change are increasingly threatening national security (UNDRR, 2019). The country has a relatively advanced DRM system, underpinned by specific legislation and governance through institutional structures at all administrative levels. Indonesia significantly strengthened its disaster management system after the 2004 Indian Ocean Tsunami, passing Law No.24 in 2007, which not only provides the legislative basis for disaster management, but also refines the roles and responsibilities of line ministries, businesses and international institutions for disaster management and risk financing. Cambodia, Malaysia and Viet Nam are also good examples of countries where robust DRM plans and dedicated institutions in charge of coordinating disaster management and response exist at national and sub-national levels. Key agencies at national level are often the disaster management agency, finance ministry, line ministries, and prime minister's office.

DRM structures and coordination mechanisms vary in terms of degrees of decentralization and devolution, but often include coordination arrangements with line ministries – including social welfare ministries, which oversee social protection, and across levels of government. For instance, in the Philippines the scale and location of a disaster determines the administrative level at which the response is coordinated. During local emergencies, DRM councils take the lead in preparing for, responding to and recovering from the effects of any disaster. In the case of larger-scale disasters, a state of calamity can be declared for a city, municipality, province and region, and ultimately, support can be requested from national

agencies. In some countries – including Indonesia, Lao PDR and the Philippines – social protection agencies are part of the institutional structure for emergency responses.

With the establishment of dedicated institutions and agencies, coordination challenges arise due to issues with the allocation of roles and budgets. In Indonesia, in addition to the disaster management agency, the National Agency for Disaster Management (BNPB), many line agencies have their own disaster response programmes and budget allocations. With little information about coordination mechanisms, and a lack of defined roles and responsibilities for central agencies involved in DRM, this has meant that collaboration between BNPB and line agencies has not always been effective, particularly across the disaster cycle. A similar problem persists between BNPB at the national level and disaster management agencies at the sub-national level, due to the lack of a precise delineation of roles and responsibilities between the two levels.

Despite the robust DRM policy and institutional environment across the region, DRF is at an early stage, and few countries have DRF strategies in place. Indonesia and the Philippines are the only two ASEAN countries to have DRF strategies, both enacted in the last six years, the Philippines in 2015 and Indonesia's in 2018. While the Philippines' DRF strategy does not make provision for SRSP (see Box 8), the more recent (but yet to be operationalized) one in Indonesia does set the basis for considering social protection a delivery mechanism. In other countries in the region, there have been some efforts to support development of DRF strategies, such as by the World Bank in Lao PDR. In Viet Nam, emergency assistance for shocks is regulated by a government decree<sup>11</sup> which includes guidance on use of the government budget. Cambodia and Malaysia do not appear to have financing stipulations in their DRM plans.

<sup>11</sup> Decree 20/2021/ND-CP, formerly Decree 136/2013/ND-CP.

Importantly, even for countries with DRF strategies, more concrete annual DRF plans might be needed. For instance, in the Philippines, the recent public expenditure review of DRF suggests that, to ensure efficient planning for the total funding required for the disaster response, the government should prepare an annual DRF strategy or plan, as a next step towards

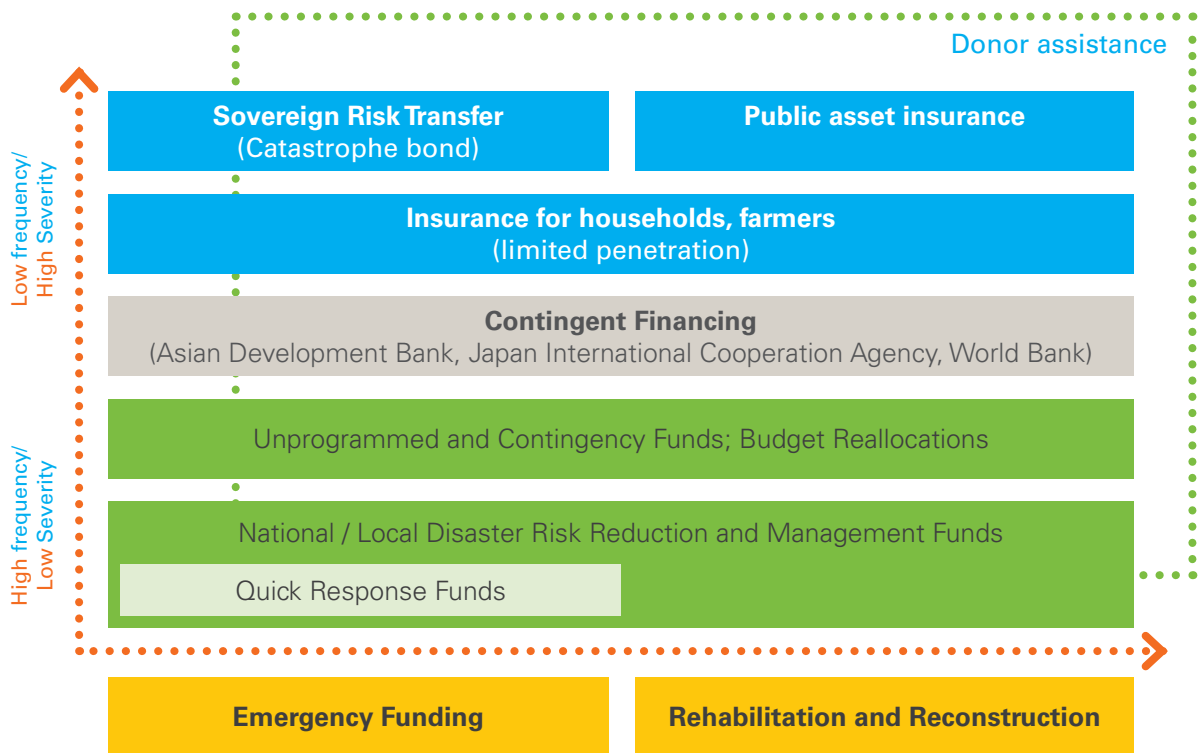
operationalizing the current DRF strategy. Such an annual risk financing plans, comparable to a public debt management strategy, should set out how the government plans to finance its contingent liability from disasters on a yearly basis, bringing together all financial instruments, including budgetary mechanisms, risk transfer and development partner funding.

**Box 8 DRF strategy in the Philippines**

The Philippines has a comprehensive National DRF Strategy, published in 2015. It was developed after Typhoon Haiyan in 2013, by the Department of Finance, with support from the World Bank and the Global Facility for Disaster Reduction and Recovery. It aims to maintain the sound fiscal health of the national government, develop sustainable financing mechanisms for LGUs and reduce

the impact of disasters on the poorest and most vulnerable citizens. It encourages risk layering using risk transfer and risk retention instruments. Efforts are now underway to develop DRF strategies at the LGU level, and to integrate them into the government’s Local Disaster Rehabilitation and Recovery Plans. The national strategy currently does not include any links to SRSP.

**The Philippines’ risk layering strategy**



Source: World Bank, 2020c.

## 5.4 Funding sources and instruments

Most recent disaster response spending appears to have been sourced from domestic budgets, typically financed by general taxation and borrowing. Although the research did not compare levels of funding with humanitarian financing of disasters, it appears that international financing accounted for a smaller portion of total spending. Humanitarian financing in the region is around 0.0365 per cent of GDP per respective country on average (WFP et al., 2019), while annual disaster losses in the region range from 2 to 8 per cent of GDP (UNESCAP, 2020). The Government of the Philippines spends 0.6 per cent of the country's GDP in post-disaster expenditures.

While there are significant differences in the development of dedicated DRF instruments across the region, overall there is a reliance on risk retention instruments and international assistance with limited use of market-based risk transfer mechanisms. Overall, few countries make use of market-based 'risk transfer' instruments, with the Philippines having the most comprehensive DRF system of countries reviewed and the only one to have successfully transferred disaster risks

to insurance markets. SEADRIF members have yet to introduce risk transfer mechanisms into their strategies. This means there is a continued reliance on budgeted emergency funds, budget reallocations, domestic and international borrowing, along with international assistance to some extent, to finance emergency responses.

In Cambodia, contingency budgets seem to be the main instrument for financing disaster response, with a budget line and disbursement mechanism established for social assistance programmes. Implementing agencies involved in the response to victims of natural disasters or crises include the MoSA, Veterans and Youth Rehabilitation (MoSVY), Social Welfare Department, and Cambodian Red Cross, which receive an annual budget allocation from MoSVY. These agencies are required by the Ministry of Finance to allocate 5 per cent of their overall individual administration budget to the contingency fund. Table 4 presents an overview of DRF strategies and instruments for each country. Box 9 provides details on existing DRF instruments in Indonesia and the Philippines.





**Table 4** DRF instruments across ASEAN countries

Country	DRF strategy	Risk retention instruments	Risk transfer instruments
<b>Cambodia</b>	No	<ul style="list-style-type: none"> <li>Contingency fund</li> <li>Food reserve system</li> </ul>	<ul style="list-style-type: none"> <li>None, although part of SEADRIF</li> </ul>
<b>Indonesia</b>	Yes	<ul style="list-style-type: none"> <li>Disaster reserve fund</li> <li>Pre-allocated budgets</li> <li>Contingent financing</li> </ul>	<ul style="list-style-type: none"> <li>State asset insurance</li> </ul>
<b>Lao PDR</b>	No	<ul style="list-style-type: none"> <li>State reserve fund</li> <li>National disaster trust fund</li> </ul>	<ul style="list-style-type: none"> <li>None, although part of SEADRIF</li> </ul>
<b>Malaysia</b>	No	<ul style="list-style-type: none"> <li>National disaster trust fund</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Myanmar</b>	No	<ul style="list-style-type: none"> <li>National disaster fund</li> </ul>	<ul style="list-style-type: none"> <li>None, although part of SEADRIF</li> </ul>
<b>Philippines</b>	Yes	<ul style="list-style-type: none"> <li>Special purpose fund</li> <li>Pre-allocated budgets</li> <li>Contingent financing</li> </ul>	<ul style="list-style-type: none"> <li>Catastrophe risk insurance</li> <li>Catastrophe bonds</li> <li>State asset insurance</li> </ul>
<b>Thailand</b>	No	<ul style="list-style-type: none"> <li>Contingency fund for emergencies</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Viet Nam</b>	No	<ul style="list-style-type: none"> <li>State reserve fund</li> <li>Disaster recovery budget</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>All</b>		<ul style="list-style-type: none"> <li>Budget reallocations</li> <li>Supplementary budgets</li> <li>Contingency funds</li> <li>Virements</li> </ul>	<ul style="list-style-type: none"> <li>Contingency fund</li> </ul>

Source: Authors.

## Box 9 DRF instruments in Indonesia and the Philippines

### DRF instruments in Indonesia

In Indonesia, a budget line called the disaster reserve fund is the main budget allocation for disasters, receiving approximately US\$275 million annually over the past five years. This budget is used by the BNPB, which is responsible for implementing disaster-related programmes. Funds can be used during the pre-disaster phase (preparedness activities) as well as for emergency response and reconstruction. Funds used for emergency response (known as 'on-call funds') are normally used to provide emergency shelter, food, facilities, and equipment. The fund is an annual allocation that is non-accumulating – meaning any unspent funds go back to the treasury at the end of the fiscal year and cannot be rolled over.

Sovereign risk transfer instruments for financing emergency responses are absent, but other arrangements are in place that provide some protection against losses. The government has introduced insurance programmes designed to protect the livelihoods of certain groups, such as rice farming insurance (AOTP), cattle farming insurance (AUTS), fisherman insurance, and small fish cultivation insurance. Furthermore, in 2019 the government established State asset insurance to protect against losses to infrastructure caused by disasters. Nevertheless, emergency response continues to be financed by the State budget, in the absence of sovereign insurance products. However, other sources of financing for emergency response are emerging. In September 2020, the Asian Development Bank approved a new 'contingent credit' agreement worth US\$500 million to enable Indonesia to access emergency financing quickly in the event of disasters. The arrangement aims to strengthen responses to disasters in future by ensuring that finance (in the form of a loan) can be mobilized quickly in the aftermath of the disaster – including for social protection.

### DRF instruments in the Philippines

The Philippines makes use of several risk

retention instruments financed through the public budget. The National Disaster Risk Reduction and Management Fund (NDRRMF) is a special purpose fund financed through an allocation in the annual budget – recipients can include national and sub-national spending agencies. A 'sub-fund' within the NDRRMF, known as the QRF, provides standby funding for disaster relief, with some 'first responder' agencies having a pre-approved nominal allocation, including the DSWD – one of the key national agencies responsible for social protection. At the sub-national level, Local Disaster Risk Reduction and Management Funds (LDRRMFs) mirror some of the functions of the NDRRMF. Unlike the national fund, there is a legally prescribed budgetary allocation for the LDRRMFs: a minimum of 5 per cent of local government revenues. Of this allocation, 70 per cent is to be used for pre-disaster activities, and the remainder for the local QRF. In addition to these and other funds, the Philippines has access to contingent credit from the World Bank, Asian Development Bank, and Japan International Cooperation Agency.

In recent years, the Philippines has also established several 'risk transfer' instruments to reduce pressure on the State budget to finance disaster response. Catastrophe risk insurance has been in place since 2017, with support from the World Bank, which covers against losses from major typhoon and earthquake events in 25 provinces and for half of the national agencies. The insurance premiums are paid out of the government's Calamity Fund. Payouts of more than US\$25 million have already been made following recent disaster events. In 2019, the World Bank issued a catastrophe bond to help the Philippines transfer US\$225 million of potential financial exposure to earthquakes and tropical cyclones to the international capital markets for three years. If an earthquake or a cyclone is projected to cause a certain amount of loss, the bond will trigger and the Philippines Government will receive budget support. The Philippines is also in the process of taking out insurance against the loss of public assets, with premiums covered through the NDRRMF.

Source: Costella et al., 2021.

In all countries reviewed, current ex-ante DRF arrangements appear to provide inadequate fiscal capacity to deal with the costs of disasters. This is the case in Indonesia, where annual allocations to the disaster reserve fund, the main dedicated DRF instrument, are far lower than actual spending on disasters. Similarly, in the Philippines, despite the existence of several instruments, most disaster spending continues to come from regular budgets, such as the agencies' own budgets, and is usually arranged ex-post. Pre-arranged budget mechanisms are relatively small compared to need: national government agencies' QRFs for immediate response activities averaged 0.03 per cent of GDP in 2015–2018 and the NDRRMF<sup>12</sup> averaged 0.17 per cent of GDP over the same period. By comparison, in coming years the country is expected to incur, on average, about US\$3.5 billion (more than 1.0 per cent of GDP) per year in losses to public and private assets from typhoons and earthquakes. Given the relatively small budgets that reserve funds in other countries are typically allocated, a similar problem is likely to be faced across the region. For instance, in Malaysia, disaster responses are largely financed from annual government budget allocations, but due to a low tax base, the country has limited fiscal capacity to finance it.

The gap in pre-arranged financing is often met through ex-post budgetary arrangements through mechanisms like supplementary budgets, reallocations, and borrowing, effectively relying on risk retention instruments to cover spending gaps. For instance, in Indonesia, there is limited fiscal space to increase the allocation of funds for disasters, due to other demands on the budget and mandatory spending. As a result, part of the funding gap when shocks happen is usually met by individual government agencies utilizing

their own budgets to fund disaster-related spending. For larger shocks, the use of budget reallocations to finance the response is most common, which imposes a significant economic cost in terms of the projects that are cut. In some cases, such as in response to COVID-19, additional financing has been introduced through a supplementary budget, with additional borrowing being used to finance the fiscal deficit.

More importantly, the shortfall between budgeted funds for disaster response and actual spending has been increasing as the frequency and costs of disasters increase. In Indonesia, the disaster reserve fund, which has received stable allocations for several years, was equivalent to 73 per cent of total spending on response and reconstruction in 2015, but just 33 per cent by 2018, indicating the growing inadequacy of annual allocations. In the Philippines, although the country's exposure to disasters is increasing, the national government's post-disaster spending has been relatively stable, at around 0.6 per cent of GDP, or 4.3 per cent of the total national budget (World Bank, 2020c). Given that the cost of disasters is expected to increase in the future due to climate change and urban growth, budgetary shortfalls – the gap between budgeted funds and actual spending – and the overall financing gap – the gap between spending and actual needs – will likely continue to rise, in the absence of necessary policy changes to increase additional sources of finance. According to UNICEF's social spending monitor, this is particularly important in coming years, given the expected economic downturn and fiscal contraction following the COVID-19 crisis. It is very likely that the gap between allocation and spending will increase in the coming years.

<sup>12</sup> This is the same as the Calamity Fund, which accounts for 70 per cent of the NDRMME.

## 5.5 Risk analytics and funding release triggers and plans

Most countries in the region do not appear to have conducted significant risk analysis to inform DRM and risk financing plans, which might be in part due to the difficulty of quantifying such risks. An exception is the Philippines' DRF strategy, developed after Typhoon Haiyan in 2013, which built on a country-specific catastrophe risk model (2014), whose results estimated that the Philippines expected to incur approximately US\$3.6 billion per year, 1.3 per cent of GDP, in losses to public and private sector assets due to typhoons and earthquakes. Despite this, agency requests for finance are not typically backed by any analysis: instead, some assumptions on previous experience are usually used. In other countries, decisions about levels of funding of contingency budgets seem to be made based on non-risk-related information: for instance, in Malaysia, the level of funds for disaster responses that are budgeted annually for sub-national governments (states) are dependent on the size of a state (UNDRR, 2020). In Indonesia, allocations to the disaster reserve fund have been stable for the past several years and do not appear to be linked to the actual likely costs of future disaster response efforts, although efforts are being made to reform this (See Box 12). Quantifying risks is not only difficult, but often only occurs in the context of a larger strategy for DRF and DRM.

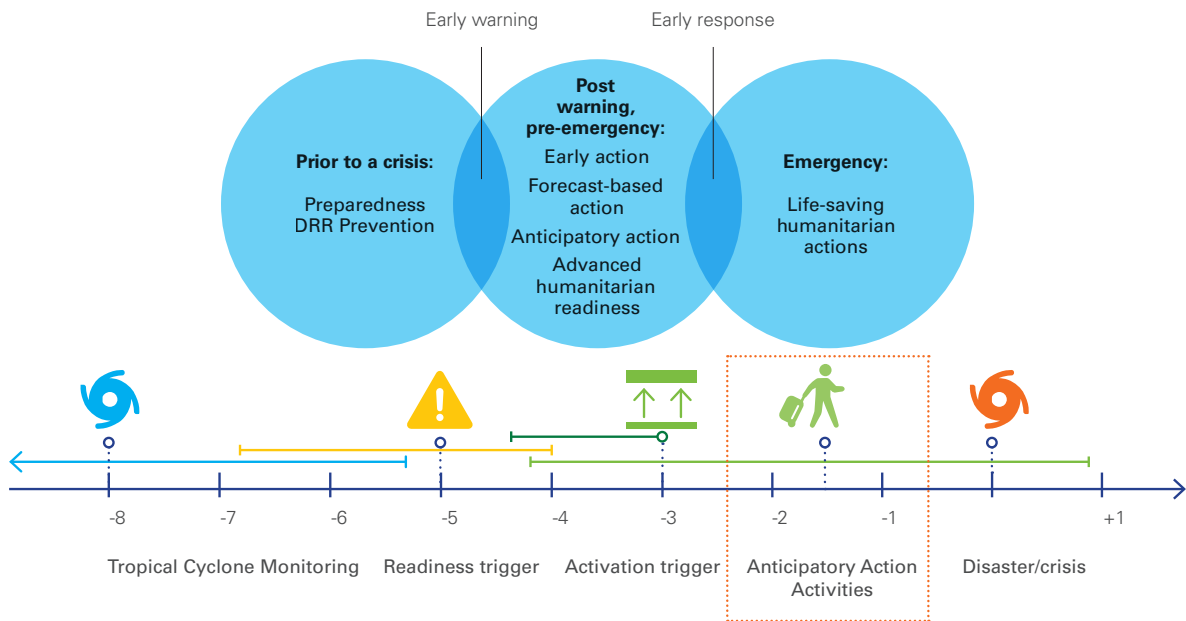
Several countries have recently conducted feasibility assessments for anticipatory action mechanisms. While they are useful starting points, they are somewhat disconnected from larger DRM and SRSP plans. Anticipatory action interventions, such as forecast-based financing, rely on in-depth analysis of risk to identify triggers, based on which financing for anticipatory action is released. In Cambodia, in-depth risk assessments for floods has translated into protocols for triggering cash transfers in six provinces and a paper on thresholds for scaling-up social protection. In Viet Nam, the monthly drought forecast map

is connected with the Viet Nam Disaster Monitoring System (VDMS) through an automatic portal. The VDMS is also linked with a socioeconomic data platform to produce vulnerability maps, which in the future can serve as a basis for overlaying drought risk with vulnerability to enable social protection action. Overall, however, anticipatory action efforts are still relatively small-scale and focus on humanitarian action and financing. Nevertheless, ongoing joint UN efforts on anticipatory action in the region are providing a significant push for moving the agenda forward in this area.

Pre-agreed funding release thresholds or triggers do not seem to exist in DRM systems in the region, which ultimately rely on emergency declarations or international appeals, which can hinder the speed of a response. This can have dire consequences for reaching beneficiaries in time. For instance, after the Lombok earthquake in Indonesia in 2018, delays by the government in launching the humanitarian appeal hindered the ability of humanitarian agencies, including the UN and NGOs, to fill the gap in response and ultimately affecting the welfare of affected populations.

However, humanitarian funding sources using funding release triggers are becoming more predictable, although efforts on that front remain small-scale. CERF has recently started testing an approach whereby humanitarian financing for anticipatory action, action before the disaster occurs, can be triggered by protocols based on pre-established thresholds. There are now three pilots in the Asia-Pacific region: in Bangladesh, Nepal, and the Philippines. In the Philippines, in a ground-breaking initiative launched for the 2020–2021 typhoon season, plans include the use of cash transfers as a core early response delivered through both the humanitarian and social protection systems (see Box 10).

**Box 10 Anticipatory cash transfers through the national social protection system in the Philippines**



The objective of this pilot is to further scale-up the quality and quantity of collective anticipatory humanitarian action to people at risk from a forecasted Category 4 Typhoon – more than 200 kilometres per hour near the centre. The pilot will cover highly vulnerable municipalities in Bicol Region (Region V) and Eastern Visayas (Region VIII), with the aim to reach 250,000 people ahead with multi-sectoral interventions through CERF funding.

If triggered, UNICEF will provide an unconditional cash top-up to around 10,000 '4Ps' households, including 30,000 children, in the target areas three days before the predicted landfall, consistent with the principles of Anticipatory Action. With a benefit level of Php1,000 per family (US\$20), calculated as 30 per cent of children's estimated minimum expenditure basket (MEB) for nutrition, education, WASH and child protection services.

Source: UNICEF, 2022a; OCHA, 2022b.

UNICEF builds on its experience of successfully pioneering the concept of SRSP with DSWD during Typhoon Haiyan in 2013 by demonstrating, once again, the feasibility of using national social protection schemes such as the '4Ps', to channel emergency disaster responses – this time ex-ante.

Considering the non-availability of an enabling policy within DSWD for Anticipatory Action in terms of disaster risk financing and funds management, UNICEF will adopt the same arrangements that DSWD has in place for its unconditional cash transfer, whereby funds are directly deposited in the Landbank account. DSWD is responsible for providing the trigger advice to Landbank as to when to deposit the funds to '4Ps' beneficiary accounts, with subsequent confirmation from UNICEF to Landbank, following the principles of Anticipatory Action.

Another emerging trend as regards to humanitarian funding is the integration of anticipatory action and social protection through the use of climate risk insurance to prevent, minimize and address loss and damage associated with the adverse effects of climate change. Climate risk insurance enables vulnerable people to better cope with climate shocks. When integrated with other risk management strategies such as informal saving schemes or social safety nets, insurance solutions offer important financial protection from potentially catastrophic events (WFP, 2021). As shown in Box 11 in 2021 the

World Food Programme (WFP) and the UN Capital Development Fund (UNCDF), in partnership with the Ministry of Women, Children and Poverty Alleviation and the private sector launched a microinsurance pilot for social welfare beneficiaries in Fiji. The scheme is aimed at protecting them financially from cyclonic storm-heavy wind and its effects. One of its key features is the absence of a loss assessment requirement to trigger the payouts, since these are independent from losses. This paradigm is rooted in the no-regrets approach which anticipatory action is based upon.

**Box 11 Upscaling climate risk insurance pilot for social welfare recipients in Fiji**

While Fiji has developed its national Disaster Risk Management plans, it does not have an integrated Climate Disaster Risk Financing strategy to better manage the financial losses that follow a disaster. The continuous losses and adverse impacts of these disasters have led the country to partner with organizations, such as the United Nations, to look for ways to better access and accelerate the use of risk financing solutions especially for the most vulnerable.

This parametric microinsurance pilot targeted select social welfare recipients found in high-risk locations. The pilot aims to test market-based timely solutions to strengthen vulnerable populations resilience to climate related shocks by enabling rapid cash payouts

(3-5 days) based on data retrieved from an independent third party and covering perils that previously were considered uninsurable (i.e., wind and rainfall).

For the first year of the pilot, WFP covered the premium costs on behalf of the Department of Social Welfare. The Government of Fiji has committed to fund the premiums for the second year, allowing upscaling beneficiaries from the current 274 individuals to 2000. Currently the premiums are set at FJ\$32 for a FJ\$400 sum insured, which is payable against Category 1 events within a range of 0-25 kms. As next steps, partners are currently involved in improving the MIS for the existing national Social Protection system and in the monitoring and evaluation for the ‘proof of concept’.

Max Wind Speed Range (km/hr); TC Category	Distance to the eye of the cyclone (km)			
	0-25	25-50	50-75	75-100
119<WS<154-Cat 1	75%			
154<WS<178-Cat 2	15.0%	10.0%		
178<WS<209- Cat 3	40.0%	15.0%	10.0%	
209<WS<252- Cat 4	70.0%	30.0%	15.0%	10.0%
>252 - Cat 5	100.0%	70.0%	30.0%	15.0%

Payout Structure Rainfall (FJ\$)	
Sum RF Range (Day before, same day & day after sum RF)-mm	Additional loss factor
> 150 RF < 200)	\$30
> 200 RF < 250)	\$60
> 250 RF < 300)	\$120
> 300	\$180

Source: WFP, 2021.

## 5.6 Flow of funds: public finance management

The use of ‘pre-arranged’ public finance management (PFM) regulations to manage disaster expenditures varies across the region. The Philippines and Indonesia have put in place a set of post-disaster PFM rules and regulations that govern budgetary procedures in the aftermath of disasters. For instance, in the Philippines, the QRF disburses funds according to a pre-approved schedule of allocations to line departments. Indonesia has specific processes for emergency responses, and for rehabilitation and reconstruction. At the national level, so-called

‘on-call funds’ can be disbursed from the disaster reserve fund to the BNPB after an emergency is declared. At sub-national level, ‘unexpected spending’ performs a similar function. Following the emergency relief phases, funds from the national-level disaster reserve fund can be used to finance rehabilitation and reconstruction grants, which are disbursed by the central government to sub-national governments most in need of support. Annual budgets at central and sub-national levels can be utilized across the entire cycle. Table 5 summarizes these arrangements.

**Table 5** PFM processes that enable disaster spending in Indonesia

PFM mechanism	Funding source	Use of funds
Standard procedures	Central government annual budget	Preparedness; emergency response; rehabilitation and reconstruction
	Sub-national government annual budget	Preparedness; emergency response; rehabilitation and reconstruction
On-call funds	Central government disaster reserve fund	Emergency response
Unexpected spending	Sub-national government disaster reserve fund	Emergency response
Rehabilitation and reconstruction grants	Central government disaster reserve fund	Rehabilitation and reconstruction

Source: Authors.

Funding flows often follow DRM institutional and legal structures, which means they tend to be allocated in a decentralized and multisectoral manner. For instance, in Viet Nam, communes are expected to assess the damage at the onset of an emergency and allocate required funds from their budget to assist the affected population. If the funds are depleted, additional ones can be requested from the district, which can also seek funding from the province until reaching the national government. In large emergencies, the national government intervenes directly. In the Philippines, LGUs can request national agencies to support disaster responses if they have insufficient resources. In Malaysia, a National Disaster Trust Fund allocates funds from the national to sub-national governments, but decisions on amounts are still tabled at Cabinet, and are made by the Ministry of Finance. In Cambodia, the contingency fund is disbursed based on approval of the Prime Minister, through a government

sub-decree. However, other agencies also appear to have budget allocations and the mandate to deliver in-kind support to victims of natural disaster, creating duplicate responses.

When institutional and programmatic arrangements are not aligned with PFM funding release rules, it hinders implementation of responses. In Viet Nam, for example, commune DRM plans are required by the Law on Natural Disaster Prevention and Control (NDPC). However, these plans mainly focus on either long-term risk reduction or ex-post disaster relief, with early actions usually missing. This hinders the access of local authorities to the NDPC fund to finance early actions. The government is revising Decree No.4/2014/ND-CP on the establishment and management of the NDPC fund, which will enable it to be used for preparedness and early action. However, it is not yet clear how the fund could be leveraged for SRSP.

In Indonesia, resources from the disaster fund can only be disbursed to the DRM agency and cannot be channelled to other government agencies. For instance, it is not possible to use the fund to ‘top-up’ the budget of the Ministry of Social Affairs (MoSA) to finance additional social protection spending. In this sense, the only inter-agency ‘channelling’ that takes place is from the Ministry of Finance – where the disaster reserve fund is held – and the BNPB, which typically spends on ‘first responder’ outputs like emergency shelters, food, and generators. To overcome this problem, government agencies typically allocate a portion of their annual budget for potential emergencies. For instance, MoSA allocates a budget towards emergency social protection programmes that can be activated following a disaster. This is not an especially efficient way of budgeting for emergencies, since disaster impacts are difficult to predict in detail and planning disaster financing on a line-by-line basis is likely to lead to under-use or other inefficiencies.

The timeliness and adequacy of financing provided through various DRF instruments varies, partly due to pre-established arrangements. In the Philippines, the most used source of financing for disaster response – budget reallocations, can take up to two weeks to be disbursed for emergency use, and months for longer-term allocations (Benson et al., 2019). Regular NDRRMF funds can take up to seven months to be disbursed. However, national QRF funds can be accessed relatively quickly within a few weeks, especially for first responder agencies like the DSWD, which has a pre-approved nominal allocation.<sup>13</sup> In Indonesia, finance from the reserve fund can be disbursed to the DRM agency in a matter of days, whereas budget reallocations usually take several months. In Malaysia, a decision on amounts of compensation to transfer to sub-national governments during every disaster needs to be tabled at a Cabinet meeting, and approved by the Minister of Finance, which takes time.

The degree of flexibility of PFM arrangements to respond to disasters varies considerably across the region. In Lao PDR, the implementation of the State budget during the fiscal year closely follows planned budget allocations and no budget reallocations take place following disasters, according to the Budget Department (World Bank,

2017). In contrast, in the Philippines, where current provisions in the Disaster Risk Reduction Law on how QRF funds can be spent are broad, problems have emerged for spending agencies because of varying interpretations by the Commission on Audit on the appropriate use of funds. At the same time, some current rules are indeed stringent: for instance, QRF funding can only be channelled into regular programmes if used to respond to disasters and not for anticipatory action.

There are trade-offs between expenditure control and speed of disbursement. In Indonesia, the social protection responses to the 2018 disasters in Lombok and Central Sulawesi were particularly slow due to regulatory requirements that prevented the release of funds until all necessary documentation was provided. In other words, fiduciary assurance and accurate targeting were prioritized over timeliness of responses. In the Philippines, requirements set out in the regulations have led to delays in disbursement of funds. For instance, payouts to the Treasury from parametric insurance in 2018 could not immediately be disbursed to spending agencies due to the requirement for appropriate evidence of damaged assets to be assessed and verified. Such rigidities in the regulations, while aimed at preventing the misuse of funds, can serve to undermine the original purpose of the funding envelope, particularly if rules and processes are not properly established and understood ex-ante.

Cumbersome rules often appear to lead to the under-utilization of funds, even though they are often deemed insufficient for post-disaster recovery needs. In the Philippines, in 2019, of the total NDRRMF available for the year, only 31 per cent was utilized. This was due to various issues, such as difficulties encountered in complying with the requisite documents, delays in hiring of staff and procurement of goods and financial reconciliation challenges. Reports from the last three years show consistently low utilization rates for regular NDRMMF/LDRMMFs, as well as QRF.

Tracking disaster expenditures is a major challenge for all countries across the region, leading to a lack of transparency around the use of funds. Across the region, it is hard to disentangle disaster spending from ‘regular’ spending as, for the most part, expenditure management systems do not

<sup>13</sup> The Department of Labour and Employment (DOLE) is another key national government agency implementing social protection programmes, such as emergency employment, but it is not a first responder agency.



use separately identifiable codes to distinguish the source of funds. Recent reviews of disaster spending in both the Philippines and Indonesia by the World Bank involved a painstaking and time-consuming process of reviewing agency expenditure reports line by line, and estimating the proportion spent on disasters. In the Philippines, despite a legal requirement for all departments, agencies, and LGUs that are allocated QRF funds to submit monthly statements on their utilization, the reports provided are deemed to be of insufficient detail. The Philippines Senate Economic Planning Office identified this as ‘a serious systemic concern considering that huge amounts of money are being poured into the QRF, and that answering efficiency concerns could mean saving more lives and properties’.

Importantly, countries in the region are starting to use development of DRF strategies as an

opportunity to reform their PFM practices. In Indonesia, upcoming reforms under the DRFI strategy aim to overhaul the mechanisms governing the availability and flow of funds for agencies involved in disaster management. Importantly, the new Pooling Fund Bencana (PFB) will establish ‘pre-arranged’ disbursement channels that enable a broader range of agencies, in addition to BNPB, to access the additional funding that new DRF policies and mechanisms will generate. Such ‘pre-arranged’ disbursement procedures will increase the speed and transparency of post-disaster spending and provide greater predictability to implementing agencies regarding the availability of funds in the aftermath of a disaster. Box 12 describes the current DRF reforms and illustrates the flow of funds and linkages between the PFB and implementing agencies.



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### Box 12 Reforming DRF in Indonesia

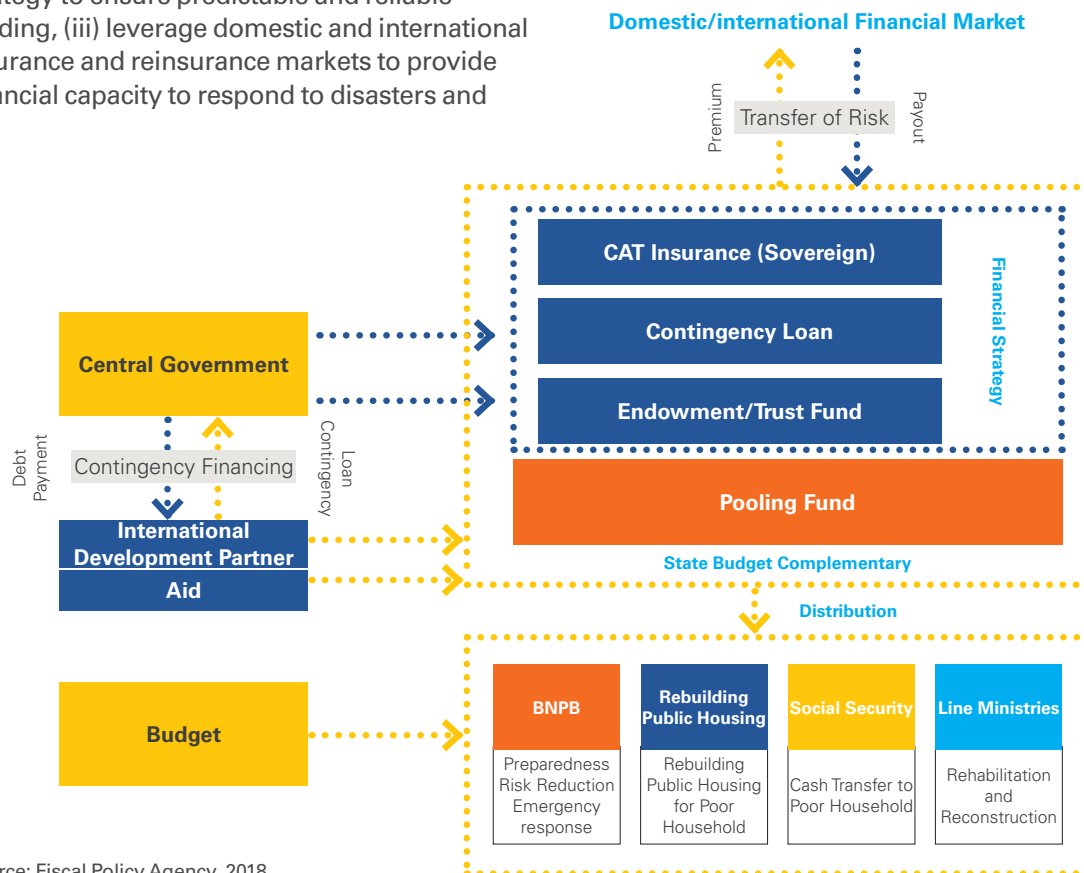
Indonesia launched its National Disaster Risk Finance and Insurance (DRFI) Strategy in October 2018. Its overarching objective is to protect State finances and the population through sustainable and efficient risk financing mechanisms that meet disaster-related expenditures in a planned and timely manner, and that deliver well-targeted and transparent assistance following shocks. The key reform envisaged under the strategy is the creation of a dedicated mechanism that establishes ‘pre-arranged’ sources of finance and disbursement channels. The strategy also aims to build an efficient risk-layering strategy to ensure predictable and reliable funding, by leveraging domestic and international insurance and reinsurance markets to provide financial capacity to respond to disasters.

With support from the World Bank, the Ministry of Finance in Indonesia is working to establish the PFB, a pooling fund. The main objectives of the PFB are to: (i) reduce the fragmentation of funding by bringing together the different sources of disaster funding under one mechanism, (ii) build an efficient risk layering strategy to ensure predictable and reliable funding, (iii) leverage domestic and international insurance and reinsurance markets to provide financial capacity to respond to disasters and

(iv) establish or streamline disbursement channels for the quick and efficient flow of funds to implementing agencies.

#### Indonesia pooling fund arrangements

The PFB aims to significantly advance the financing options available to fund disaster management in a cost-effective manner. The fund is expected to increase the availability of disaster finance in two key aspects. First, the structure will enable the government to accrue unspent budget allocations for disaster responses for future years, which is currently not possible within the framework of the annual budget. These funds will continue to be used to cover the cost of frequent, less severe events. Second, the fund will put in place lines of contingent credit and risk transfer instruments, such as sovereign catastrophe risk insurance, to protect the State budget from more severe disasters. The payouts from these instruments will flow directly into the PFB, for onward channelling to the various line ministries responsible for implementing emergency response programmes.



Source: Fiscal Policy Agency, 2018.

## 5.7 Delivery: SRSP systems

Despite their rapid socioeconomic ascent, many countries in EAP have relatively weak social protection systems, with large gaps in coverage. Overall, the state of social protection systems in nations such as Indonesia, the Philippines and Thailand is characterized by strong policy frameworks, but fragmentation and weaknesses in administration. In countries such as Cambodia, Lao PDR, Myanmar and Viet Nam, social protection is still nascent, with some recent developments in introducing large social assistance schemes such as the Integrated Family Package in Cambodia and the Maternal and Child Cash Transfer and universal social pension in Myanmar. Some nations have developed significant large social assistance schemes often targeted at poor households, but the overall social assistance system leaves many vulnerable and poor individuals without support.

Unlike in the Pacific and East Asia, see for example Fiji's and Mongolia's experiences in previous sections, countries in ASEAN had limited or no experience with SRSP before COVID-19, and SRSP policies and programmes are nascent. Previous research on SRSP in ASEAN (WFP et al., 2019) noted that there were only a handful of documented experiences in the use of social protection to respond to shocks in the ASEAN region, with the most notable example being the response to Typhoon Haiyan in 2013 in the Philippines. Other examples include both a vertical and horizontal expansion of the scholarship programme *Bantuan Siswa Miskin* in Indonesia, this country's conditional cash transfer programme (PKH) in response to a fuel price crisis in 2013 and Thailand's use of contributory social protection measures in response to the 2011 floods. Besides the Philippines and Indonesia, Cambodia is one of the few to have progressed on developing a SRSP policy framework since 2018.<sup>14</sup>

There are currently limited linkages between social protection and DRF strategies, although social protection agencies are part of the DRM structure in several countries. Only two in our review, Indonesia and the Philippines, have a DRF strategy and neither has clear linkages between social protection and a DRF strategy. However, social protection is part of the disaster response system in many countries and in some, such as Cambodia and the Philippines, social protection agencies have pre-allocated budgets for disaster responses.

Information management and systems, especially limited integration of disaster risk and beneficiary data systems, hinder effective responses through existing social protection systems. For instance, beneficiary and social registries are present in some ASEAN countries, but they are often outdated and collect limited information to measure exposure to risks and vulnerability and cannot detect or predict sudden changes to socioeconomic outcomes in case of shocks. Without an updated registry that can be overlaid with disaster risk data, real-time assessment of disaster impacts and needs often leads to delays in use of SRSP. This challenge applies to all countries currently using social registries to target social protection, including DTKS in Indonesia, ID Poor in Cambodia, and Listahanan in the Philippines.

In Indonesia, the use of the DTKS (Indonesia's current social registry) to select eligible disaster beneficiaries is currently not possible as the database is not comprehensive enough to accurately identify vulnerable and transitory poor households affected by disasters. As such, manual identification and verification processes are a major factor contributing to delayed response to disasters. The absence of a centralized information and data centre for post-disaster management is another factor that causes slow provision of government assistance.

<sup>14</sup> Until 2021, Myanmar had also made significant progress on this front. The Maternal and Child Cash Transfer was designed with a SRSP component from the onset, and the government took serious steps towards building the foundations for a more resilient social protection system. An SRSP roadmap produced in 2018 was endorsed, supporting coordination between the DRM and Social Welfare departments, both under the same Ministry of Social Welfare, Relief and Resettlement.



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Data collection is typically conducted by different agencies depending on the entity responsible for each programme, creating inconsistencies.

In most countries, social protection is not linked to protocols for early action and disaster response, except to the extent that social protection agencies are sometimes part of coordination mechanisms led by the DRM agency. In the Philippines, early warning systems exist for rainfall, drought and storms, as well as earthquakes and geologic hazards, but there are currently no operational linkages between early warning systems and national social protection programmes. However, as part of a joint UN anticipatory action project in the country, scalability frameworks and an operational manual for cash transfers during drought and typhoons have been developed and contributed to the targeting of cash transfers

in the 2021–2022 pilot on anticipatory action under CERF.

In Cambodia and Viet Nam, social protection agencies are part of line agencies involved in disaster responses and have contributed to delivery of in-kind benefits after shocks. In Viet Nam, Decree 20/2021 (formerly Decree 136) currently sets out the links between social assistance and emergency assistance. However, a UNICEF analysis found that it was not prescriptive enough to translate into action, with emergency assistance in Viet Nam focused on assessments of damage to structures and housing, rather than needs of affected populations, which hinders the targeting of the most vulnerable and setting up accurate benefit levels to support them. Thus, linkages with social assistance are not explicitly made (UNICEF, 2021a).



Even in countries with well-institutionalized social protection programmes, shock responsiveness can be limited due to programme design. For instance, in Indonesia, flagship social protection programmes, such as PKH and Sembako, are not designed to adjust to disaster situations as they cannot easily add new beneficiaries or change benefit amounts provided to beneficiaries in case of shocks. Instead, separate emergency programmes are used, which operate independently of ‘regular’ programmes. These emergency programmes are implemented by the Directorates of Social Protection for Natural Disaster/Social Disaster within MoSA, whereas regular programmes are implemented by the Directorate for Family Social Security. No formal coordination mechanism exists between these programmes, and they follow separate mechanisms for implementation.

In the Philippines, which has a relatively more advanced SRSP system (see Box 13), SRSP programmes are only now explicitly becoming established.

The ability of delivery (payment) systems to be shock responsive varies greatly across the region. For a delivery system to be shock responsive, there must be multiple options to deliver payments to households, including manual payments for those in remote areas. For instance, payments for PKH and Sembako in Indonesia are electronic (using bank accounts) in most areas, barring the most remote and poor regions of the country, where manual payments continue to be used. In many low-income ASEAN states, such as Cambodia and Myanmar, the delivery of social protection benefits is still largely manual (through post offices), rather than electronic, and financial inclusion is limited. Although mobile money has made inroads in recent years, its use is still not widespread.

### Box 13 SRSP in the Philippines

The Philippines has a relatively advanced SRSP system. There is increased policy coherence, with social protection sector objectives integrating vulnerability to covariate shocks. This is further strengthened by close institutional arrangements as, institutionally, the government leads for disaster response and for social protection sit within the DSWD. The secretary of the DSWD acts as vice chairperson for disaster responses on the National Disaster Risk Reduction and Management Council (NDRRMC), the national body for coordination of all disaster management-related issues. The revised Social Protection Operational Framework and Strategy (2019) notes the use of social protection to respond to 'environment natural and human induced risks', and recognizes the need for flexibility in the design of social protection programmes to respond to potential disasters. However, there is no explicit commitment to using social protection programmes to respond to natural disasters.

The shock responsiveness of the social protection system is made possible by relying on existing programmes and infrastructure. Within national social assistance programmes, the use of 4Ps to support response to Typhoon Haiyan in 2013 is well documented.

Since then, regular social assistance programmes have been used periodically to support emergency response. At the same time, the targeting and delivery mechanism of 4Ps has been used to identify beneficiaries and to support them through other ad hoc or dedicated emergency response programmes.

The dedicated Emergency Cash Transfer programme designed by the DSWD is not yet operational. The DSWD established a dedicated Emergency Cash Transfer programme in 2019, which seeks to link disaster responses to social protection systems, building on the experience of 4Ps and the Listahanan poverty registry. Guidelines for the programme have been developed and an operations manual is being prepared. The programme, which has yet to be activated, aims to provide post-disaster support to vulnerable households, complementing the provision of food and in-kind assistance during emergencies. It is expected to use the DSWD's existing social registry (Listahanan) and delivery mechanisms to provide quick additional assistance to affected 4Ps beneficiary households, and also to expand support to non-4Ps vulnerable families who may become poor due to a disaster.

Source: UNICEF, 2022b.



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## 6 TOWARDS MORE EFFECTIVE FINANCING OF SRSP

The nature of the shock matters greatly for mobilizing significant financing and delivering it in a timely manner (Figure 10). The clearest example is the large fiscal response to the socioeconomic impacts of COVID-19, where both financing and the use of social protection systems were unprecedented.

However, COVID-19 is significantly different from the type of natural hazard-related shocks that EAP is highly exposed to on a more regular basis. The socioeconomic impacts of the COVID-19 shock originate mainly from containment

measures imposed by governments and are extremely widespread in terms or scope – almost everyone is affected. This creates a fiscal and political imperative that is not comparable to most other disasters. While disasters originating from natural hazards can affect populations at scale, government responses to mitigate their impacts do not often cause further, prolonged disruptions to livelihoods. A key feature of the pandemic-related social protection response was the use of these measures to justify lockdowns and to mitigate their impacts on almost all citizens.

**Figure 10** Disaster financing-related challenges in EAP



Source: Authors.

In the same vein, while large-scale disasters and shocks often get attention, a significant gap in financing and implementation might exist for smaller, more regularly occurring shocks. Besides large-scale disasters, many countries in the region have experienced small, localized disasters, such as recurrent flooding, drought, or landslides. However, the findings from our review, as well as international evidence, show that financing and delivering benefits in more localized shocks tends to be more challenging. In several of the countries reviewed, national-level financing and support is only available once the disaster is 'big enough'. DRF strategies are almost always developed for the national level. International humanitarian funding might also be more available in those cases. Given the existing gaps and challenges in local funding and capacity, smaller and more localized shocks might be overlooked.

While funding itself is key, having efficient DRF, PFM and SRSP pre-arranged mechanisms in place is crucial, and possibly more challenging. This includes knowing where the funding is going to come from, using triggers to decide in advance how the funding is allocated in different circumstances, and having disbursement channels permitted in regulations prior to a disaster striking. For instance, the lack of pre-agreed thresholds for action and having to rely on emergency declarations or government appeals before launching a response can severely delay efforts to reach communities, as per the example of the Lombok earthquake in Indonesia. Moreover, rules and regulations that are flexible enough to allow rapid disbursement, while ensuring transparency and accountability, appear to be major bottleneck in ensuring efficient utilization of funds. Coupling financing lines with implementation and delivery responsibilities across different agencies or levels is challenging, and sometimes leads to duplication of efforts on the ground.

While the availability of financing is a necessary condition, it is not sufficient to enable social protection systems to be shock responsive. Strong pre-existing 'core' social protection systems, in tandem with shock-responsive

systems on the other hand, are essential. The ability of a social protection system to be shock responsive is determined by its coverage and strength of delivery systems – identification, registries, payments – all of which are financed, designed and developed *before* disasters occur. Regular social protection systems are typically financed from regular budgetary funding, but the effectiveness of SRSP might primarily depend on its design and implementation systems, more than on its pre-arranged financing. Even in countries that have 'pre-arranged' financing including for social protection, such as the Philippines, delays in response seem to have occurred because of challenges in system design and capacity, such as beneficiary identification and registration. Delays can also be caused by policy limitations, such as caps on the number of beneficiaries within social protection programmes in Indonesia and the Philippines,<sup>15</sup> and other limitations – for instance, funding for anticipatory action not being allowed by current regulations. Thus, experiences in the region have shown that the existence of dedicated financing might not currently be the main constraint in disaster response through SRSP.

## 6.1 Disaster Risk Financing

- DRM legislation that includes a financing provision and preferably a DRF strategy: as an important instrument for overall disaster responses, DRF strategies ideally not only identify and arrange sources of finance but, more importantly, define the overall set of parameters and arrangements under which such funding is to be used in response to shocks. However, even relatively less sophisticated integration of funding arrangements in existing legal and institutional DRM structures is important. In Indonesia and the Philippines, existing laws on DRM established pre-arranged funding for certain agencies, even before DRF strategies existed. But even more basic arrangements, such as those in Viet Nam, seem to have helped in speeding-up disaster response.

<sup>15</sup> Indonesia's PKH is capped at 10 million people, whereas the 4Ps in the Philippines by law can only cover up to 4.4 million households. While this limitation might not be a problem for vertical expansions, it shows the need for having not only one anchoring programme for SRSP, but various.



- An established concept of ‘pre-allocated’ budgets or funds for emergency programmes: notwithstanding the implementation rigidities and delivery delays associated with existing emergency programmes, countries that have managed to put in place comprehensive shock responses all have at least an appreciation of the importance of ensuring that emergency programmes are funded in advance. In general, this funding is in the form of reserves or contingency budgets.
- Multiple sources of pre-arranged funding, including access to funding sources that can support risk retention instruments: countries use a range of instruments to respond to shocks. Evidence suggests disaster responses in recent years, as well as to COVID-19, have primarily been financed through risk retention instruments, rather than risk transfer instruments. This means countries that have greater ability to borrow – Indonesia, the Philippines, Thailand – or increase domestic revenue are better able to successfully leverage these instruments either before or after the shock. While the extensive use of risk retention instruments might be highly inefficient, this situation is unlikely to change in the short term. This points to the need to develop cost-effective, well-functioning risk retention instruments. Moreover, knowing the true costs of risk retention instruments through planning and tracking of disaster expenditures can enable better risk financing.
- Availability and flexibility of risk transfer financing instruments that cover high-severity, low-probability risks: recent experiences show that countries rely on risk retention instruments even for large-scale disasters, partly because market-based risk transfer instruments have not been established. However, pre-arranged market-based risk transfer instruments also tend to be highly specific in regard to the type of risks they cover and the levels at which they trigger. This might lead to a situation where for risks that have not been adequately considered, such as pandemics before COVID-19, risk transfer instruments might not be available, even in countries with more sophisticated DRF arrangements. More flexible risk transfer instruments, or coverage of a larger set of risks, could make financing through these mechanisms more appealing.

## 6.2 Public Finance Management

- The use of ‘pre-arranged’ PFM processes to manage disaster expenditures: countries should ideally have PFM regulations that enable the flow of funds rapidly in anticipation of, or in response to, disasters. Even in countries to have developed innovative DRF instruments over the last few years, the actual channel through which funds flow from the treasury to line agencies responsible for social protection responses is often unclear or problematic, leading to significant delays. Similarly, while dedicated funds are common, they sometimes lack enough clarity in their rules and regulations to be efficient. There is clear evidence that quick disbursement of money at sovereign level has not necessarily allowed quick support to households. This is confirmed by the little evidence available on how payouts make their way through the budget system. Clear PFM rules are vital in providing the bridge between sources of DRF and SRSP systems. At the very least, clear rules are required on how additional money can be channelled to spending agencies in mid-fiscal year to address unexpected shocks – for instance, through budget reallocations or supplementary funding from insurance payouts – in a timelier manner than is currently the case. Ideally, permitted disbursement channels should be pre-arranged in advance, with clear ‘triggers’ to determine when the rules come into effect to save time once a disaster has occurred.
- Strong government coordination across levels and agencies, including sufficient devolution of PFM and delivery arrangements: at the national level, funding disbursement arrangements across agencies can sometimes be too stringent, as in the case of Indonesia, where it is not possible to use the disaster fund to ‘top-up’ MoSA’s budget to finance additional social protection spending. In addition, most disasters – such as floods, landslides, and droughts – are localized, so the ability of local governments to respond is key. Even in cases where the fund disbursement mechanism exists, challenges arise from multiple agencies or levels implementing uncoordinated responses, which might lead to inefficient use of resources.

- A strong PFM system, including a careful balance between the ability to utilize budgets flexibly and also track and report disaster expenditures, can avoid under-utilization of funds while increasing the transparency and acceptability of social protection spending during shocks. The PFM system will affect the speed and effectiveness of any social assistance response to disasters. Clear rules can enable timeliness if they are not unreasonably stringent in an emergency context. In particular, PFM rules that might lead to under-utilization of funds are problematic, as this creates issues of efficiency and fairness, especially when funds come in the form of international grants and non-concessional aid. Similarly, as things stand, a lack of tracking of DRM-related expenditure, as well as issues with the utilization and transparency of spending, will impact how pre-arranged sources of finance can be used for SRSP. If SRSP is to become a more politically accepted option, this sort of transparency is key and rules and regulations for disbursing, tracking and reporting expenditure need to be in place, and to function well.

### 6.3 From the ground up: Strengthening the underlying social protection systems

- Having a strong core social protection system in place is a necessary condition, but shock-responsive features are also important: there is a clear pattern in which countries with stronger core social protection systems are better able to respond. Nevertheless, the experience of recent disasters also demonstrates the need to design social protection programmes and systems with shock responsiveness in mind. For instance, some of the countries reviewed such as Indonesia have separate, long-standing social protection programmes specifically created to respond to disasters, but these tend to be small and inefficient, and hence not actually shock responsive. On the other hand, large, flagship programmes are sometimes inflexible, such as when beneficiary caps written into policy or legislation prevent them from expanding beyond a certain number of beneficiaries. Finally, in many countries, social protection agencies are part of disaster response coordination mechanisms, but their inability to deliver might be more related to weaknesses of the basic social protection system. This evidence points to the need to move beyond a programme focus and to look at how strong, core social protection systems can also be made shock responsive as a whole, by including system-wide shock response features and financing.
- A range of social protection interventions that can address different needs, scales and timelines of disasters: for instance, social assistance, social insurance and labour market<sup>16</sup> programmes can all be used differently to address the needs of different groups in an emergency, as demonstrated by the COVID-19 experience. In addition, there might also be different roles to play for social protection and humanitarian actors, depending on the scale of the shock, with potentially a layering approach between the scale and time of response.
- Balance of speed versus targeting and fiduciary concerns in programme design, with additional flexibility in case of disasters: delays in delivering benefits even in countries with more sophisticated financing and social protection arrangements demonstrate an implicit preference for accurate targeting and fiduciary assurance over timeliness, which may be too stringent in a disaster context. While the response to COVID-19 across the region was significantly more effective compared to previous shocks, the fact that several new temporary programmes had to be created to channel funds to beneficiaries, rather than expanding existing 'regular' programmes, might also demonstrate the rigidities that exist in the design of core social protection programmes.

<sup>16</sup> While labour market interventions have played a significant role in the response to COVID-19, our study did not document this type of intervention for other shocks, partly due to research constraints.

- Linking disaster financing and response structures to social protection policies and systems. This includes the following:
  - Aligned policy and legal structures, such as including social protection as part of disaster response mechanisms, including dedicated funding or in more advanced cases, aligning DRF and SRSP strategies and plans.
  - DRF strategies that include linkages to PFM and SRSP practices. Developing effective SRSP, and the use of DRF to support it, is contingent on the presence of a strong legal and policy framework, backed by clear institutional mandates and capacity, as well as operational guidelines. DRF strategies are important mechanisms to achieve such institutionalization.
  - A plan for what type of support SRSP is expected to provide and how to fund it. While the ability of a social protection system to scale-up at some point is essential for SRSP, social protection cannot replace disaster responses and the speed of a response is not always the most important factor. Ex-ante support, response and recovery phases have different financing needs in terms of social protection. For that reason, social protection might require its own risk financing plans, within the country's overarching plan.
- The existence of advanced and updated registries, information and payment systems: scant accurate beneficiary data remains a major bottleneck for effective responses to disasters. Social protection responses to COVID-19 have provided significant impetus towards development of data systems and have propelled significant innovations in this regard. The question remains whether and how these systems will become more embedded in the overall disaster response system and other national-level institutions – for instance, by aligning social and national registries.
- At the institutional level, a careful balance between global or national instruments versus local implementation: for SRSP to be operational, it is essential that DRF is available to local governments, which are typically responsible for most localized disasters. In the same vein, local governments must have access to instruments within social protection systems – such as “registries and payment – which allow for responses to shocks. Across ASEAN member countries, the most advanced social protection programmes are financed and operationalized at the central level, in contrast to DRM, which is usually devolved.



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## 7 CONSIDERATIONS FOR FUTURE FINANCING OF SRSP

This section explores: (i) lessons from COVID-19 for other shock responses, (ii) lessons for regional financing options and (iii) lessons for linking with the humanitarian system. A summary of challenges and opportunities for moving the SRSP agenda ahead is also provided.

### 7.1 Lessons from COVID-19 social protection responses

COVID-19 is an unprecedented crisis, and the speed and scale of the financing measures to respond to it are unprecedented. First, it is important to keep in mind that even sophisticated DRF strategies would have faced challenges to cope with this type of shock, as pandemics have not usually been among the type of risks countries financially protect from. More importantly, while previous disaster responses have almost always been specific to one location within a country, COVID-19 affected countries nationwide. This required an all-encompassing fiscal and non-fiscal response that exceeded the capacity of the limited financing instruments of most countries. Legal

measures were put in place to enable sweeping re-arrangements of funds. Borrowing happened at a much larger scale, at a speed comparable to the delivery of risk transfer instruments and it was generally less costly given market conditions. While these processes and measures were successful to a certain extent in most cases, they still required significant time, and might have resulted in difficult cuts to budgets in important areas.

Ultimately, however, the socioeconomic impacts of the shock were triggered by government actions to stop the pandemic. Hence, measures put in place were more of a compensatory nature than those implemented in response to the direct impacts of natural hazard-related shocks. The political imperative to undertake such sweeping actions may not be so strong in the case of less severe shocks or a less global shock. In the case of COVID-19, global responses elsewhere might have provided support for actions that would normally not have occurred.

Social protection responses to COVID-19 are unparalleled, although there were significant implementation challenges. Most ASEAN

member countries put in place COVID-19 responses reportedly more efficient and effective than ones to previous shocks. The scope of coverage was unprecedented. However, all countries encountered delays associated with rapid identification of large new groups of people becoming vulnerable, targeting and validating beneficiaries, and reaching them with benefits. Despite the challenges, responses appear to have reached vast numbers of people at a considerable speed.

COVID-19 has shown it is not impossible to rapidly respond through social protection, even with limited pre-existing systems, but the scale witnessed is unlikely to become a model for future responses to disasters caused by natural hazards. The experiences with COVID-19 have shown that, when the stakes are high enough, even countries with limited systems will find a way to respond, including through social protection. However, COVID-19 is exceptional: key informants agreed that, while some lessons could be taken forward, it was unlikely that such large responses, high levels of financing, and relaxation of rules would be replicated for other 'more common' shocks. Hence, it is even more important that pre-arranged systems are in place for other shocks. The experience with COVID-19 has led to strengthened social protection systems across the region, with systems—especially registration and payment ones—being tested and further refined and improved to respond to COVID-19. Future SRSP will need to build on those systems.

While it is not yet possible to truly analyse the effectiveness of COVID-19 measures, they might lead to increased financing of social protection in the short term, but cuts in the medium term. The pandemic might have unearthed deep structural issues surrounding the state of social protection in the region, but it might also have signalled the need to further invest in the sector. In Malaysia, for example, the 2021 budget announced a significant expansion of mainstream social protection schemes – including Malaysia's means-tested child grant – that, if implemented, will play an important role in cushioning the longer-term development of social protection benefits. On the other hand, COVID-19 responses are putting significant pressure on countries'

fiscal space, and a contraction in the economy might lead to cuts in social protection spending in the longer term. Global evidence suggests that governments respond to disasters by first increasing public spending, followed by budget cuts and contractions, such as in the 2008 global financial crisis (Ortiz et al., 2015). This points to the need to redouble efforts to protect social expenditure even when stimulus packages are over and public debt has increased significantly. Moreover, disasters impact public financing by increasing spending and reducing the ability to collect tax, thus eroding fiscal discipline. COVID-19 is the clearest example of this. Given this scenario, and considering climate change-exacerbated shocks, it is likely that the gap between allocation and spending will increase in the coming years.

### 7.1.1 Regional risk financing

Regional efforts appear focused on development of risk transfer instruments and risk pooling, though our study points to these instruments only being useful in as much as they are part of a comprehensive set of risk financing instruments. Moreover, there is no evidence of any ongoing effort to help countries strengthen PFM systems as part of DRF plans. While there are some efforts to support stronger risk analytics and institutional strengthening around DRF, these seem to be small compared with the scale of the challenge. Our research did not uncover significant efforts to link DRF and SRSP at the regional level. Overall, the lesson is there might be a need to expand support beyond risk transfer, and to link DRF more with SRSP.

### 7.1.2 Linkages with humanitarian action

Humanitarian action and financing are important sources of DRF in the region. However, they are mostly ad hoc and unpredictable. Efforts to develop financing mechanisms associated with triggers and EAPs, such as anticipatory action, are still small-scale. In order to be a significant source of financing and responses, they need to be significantly scaled-up.

Greater opportunities exist to align and collaborate across humanitarian action and SRSP. The strengthening of social protection systems that COVID-19 has resulted in should provide a more solid base for alignment with humanitarian systems, and for transferring some shock response functions from humanitarian to social protection systems. However, for humanitarian assistance to make use of social protection systems more effectively, humanitarian donors will need to overcome challenges in financing the building blocks of social protection systems, as systems need to be in place before they can be used for shock responses.

Emergency responses are still the purview of disaster management and humanitarian agencies. An analysis of risks and vulnerabilities might help elucidate when and where social protection interventions are more cost effective than humanitarian or disaster response ones. While speed is often the primary concern of humanitarian actors, the value added of social protection might lie in its long-standing systems, as well as its scale-up potential. With that in mind, the agenda for governments – and social welfare agencies in particular – is different from that of DRM and humanitarian actors.

## 7.2 Challenges and opportunities

There is increasing consensus around basic questions in DRF and SRSP: what needs to happen, who needs to be involved, where should efforts be concentrated, and even how instruments can work together. This consensus

provides a range of opportunities for further work and exploration. Nonetheless, there are challenges to the uptake in DRF generally, and specifically for SRSP.

### 7.2.1 Challenges

<p>Development and coverage of 'regular' social protection systems remains fundamental to SRSP</p>	<p>Global evidence shows that stronger social protection systems, with robust administrative capacity, high coverage and provision of adequate support, offer more opportunities for shock-responsive interventions (O'Brien et al., 2018). The social protection coverage in East Asia and Pacific is currently below the global average and until there are strong systems in place, nascent social protection systems should not be overburdened. There must be careful consideration of capacity as well as policy trade-offs, managing 'regular' social protection outcomes as well as the disaster response imperative, in pursuing the SRSP agenda.</p>
<p>Financial products for disaster risk are increasing – but there is no focus on the poor</p>	<p>There has been a significant increase in the range of financial products available for DRF. Many products are designed to protect the fiscal space of governments, increase liquidity and the majority focus remains on government assets. In short, there is a lack of predictable and layered funding sources for financing SRSP interventions.</p>

<p>Public/political pressure: disruptive initiatives such as SRSP may be cost-effective, but they challenge the status quo</p>	<p>While frequent and timely payouts help demonstrate the value of the proposed product (World Bank, 2016a; 2016b), public and political pressure increases when payments for premiums on high-profile financing mechanisms do not yield a payout in the event of a disaster.<sup>17</sup> Demonstrating value for money can help counter any public or political criticisms.</p> <p>Establishing a long-term commitment to payment of premiums by, or on behalf of, countries is one of the most serious challenges. Politicians often have difficulty justifying investments in risk management that require governments to pay for something that does not demonstrate an immediate benefit. Investment in insurance has a value proposition that extends over a long period of time, while budgetary and political cycles have short-term time frames. Allocating budget for the payment of premiums is generally not a permanent part of budgetary processes, with expenditure still treated as atypical, even when it is possible.</p>
<p>Coordination multi-stakeholder initiatives, such as SRSP, require investments in coordination if they are to succeed</p>	<p>Stakeholder coordination: given the various sectors, disciplines, authorities, partners and other stakeholders working on this new area, there is considerable experience of confusion and fragmentation. To address this coordination structures should be strengthened:</p> <p>Within government: horizontally – between sectors and authorities responsible for early warning and forecasting, information management, disaster mitigation, emergency response and social protection – and vertically – between county and central government to clarify when to use forecasts as triggers for action, where decisions about action are taken and agreement on how these are funded.</p> <p>Between governments in the region: ASEAN has called for strengthened cooperation and sharing of information and experiences among member economies and neighbouring states.</p> <p>With and between development organizations to avoid overlapping efforts in the region.</p> <p>Coordinate measurements: many instruments and sponsoring partners use different metrics, across different geographies. There should be a regional effort to coordinate and harmonize the language and metrics of SRSP as well as the content of responses, triggers and amounts of benefits.</p>
<p>Technical expertise: DRF is a new and technical area of work where skills are at a premium</p>	<p>Significant impediments remain to collecting and analysing data on hazards and exposures necessary for development of DRF strategies.</p> <p>Technical and institutional expertise on risk assessment and modelling in many economies needs to be strengthened to provide a comprehensive, co-ordinated view of disaster risk across levels of government and segments of society.</p> <p>Much of the technical expertise resides in a private sector vehicle, created to serve the public-sector clients of each facility. While necessary, this expertise needs to re-balance so the public sector has sufficient understanding and expertise in-house.</p>

<sup>17</sup> For example, Jamaica after Hurricane Dean in 2007, the Solomon Islands after the 2013 earthquake and tsunami, and Malawi after the drought in 2016.

<p>Sustainability, a balance of investments is necessary, to reduce risks as well as transfer risks</p>	<p>DRF in general, SRSP in particular, must be part of an integrated risk management framework that incentivizes risk reduction. Reducing the size of the risks to be transferred drives down the cost of transferring the risk.</p> <p>Risk transfer should only be used where it is cost-efficient or where benefits of risk reduction (including a more efficient response) materialize incrementally.</p>
<p>Timing and targeting, a trade-off, usually exists between effective targeting and rapid response</p>	<p>A key challenge is to strike a balance between providing rapid support following a shock and accurately targeting those most in need. Case studies from Ethiopia and Malawi show that the cost of a drought to households can increase from zero to about US\$50 per household if support is delayed by four months, and to about US\$1,300 if support is delayed by six to nine months (Clarke et al., 2013). While this highlights the need for quick delivery of initial support, effective targeting of assistance remains important for the cost-effectiveness of schemes.</p> <p>Targeting specific households or vulnerable groups at any time – but especially pre-or-post disaster – is time consuming and difficult, often because of the lack of data, low administrative capacity, and political economy factors (Coudouel et al., 2002).</p>
<p>Incentives: there are historical, bureaucratic and allocation reasons why the status quo may be preferred</p>	<p>A fundamental question for governments that must be answered to justify the up-front cost required for instruments like insurance is “who owns the risk?” and consequently, “who should pay for it?” <i>Ex-ante</i> financing schemes first demand that risk is quantified up front for pricing and structuring, which can highlight the magnitude of potential (World Bank, 2016a). But, this can prove awkward not least as post-disaster response is widely regarded as more visible and defensible, and decision-making at national and local levels is often based on relationships of political patronage.</p> <p>Moving countries from a largely ex-post approach, where financing mainly relies on donor partners to an ex-ante model, where the countries themselves are expected to pay for some if not all of the cost, is a significant challenge. If governments know they can rely on international aid, there may be little incentive to invest in resilience programming or risk reduction/transfer financing (Clarke et al., 2016). SRSP will need to be presented as part of a suite of approaches to managing disaster risks, not as a replacement for existing response mechanisms.</p> <p>A scaling-up of forecast-based financing would need to accommodate prevailing clientelist structures. The risk of ‘acting in vain’ - delivering early action when forecasts turn out to be inaccurate - is a major perceived barrier to scaling-up forecast-based financing, particularly given the implications for accountability and perceived misallocation of finite resources.</p>
<p>Affordability: making DRF and SRSP affordable in the short term may require subsidizing costs</p>	<p>Willingness to pay actuarially sound premiums has yet to be widely demonstrated. ARC and PCRIC continue to face challenges in building demand, fighting against the lack of fiscal space and lack of short-term political benefit.</p> <p>When premiums on micro-insurance have to be covered by the insured, insurance can exacerbate inequality as only the wealthier can purchase premiums. Successful insurance approaches at the micro level might need to include measures to lift the insured beyond a critical threshold that makes insurance useful for them, such as by complementing insurance with asset accumulation programmes.</p>



<p>Data: the volume and quality of disaster data to make financing decisions is insufficient</p>	<p>Improving the quality, consistency and availability of data on hazards, exposures, vulnerabilities and losses is critical for the functioning of disaster insurance markets as well as SRSP. Strengthening risk and financial vulnerability assessment would assist with better understanding the impact of disasters, including interlinkages and interdependencies across economies, better targeting financial assistance and improving the cost-effectiveness of recovery assistance.</p> <p>More granular, high-quality information on a variety of hazard risk data (including vulnerability and exposure) and historical disaster impacts. For forecast-based financing to reach the most at-risk areas and most vulnerable people, it is important to access the lowest administrative-level data available.</p> <p>Any index-based approach – at macro, meso or micro levels – requires an index that reasonably proxies the impacts of drought on the target population. Index-based insurance has a heavy dependence on the availability of sufficient data for developing risk models of probable loss and is therefore often suited to regions or countries with long historical weather data series, good coverage by weather stations, and easy access to satellite imagery.</p>
<p>Use of proceeds: ensure that financing from disaster risk strategies reaches people in need including through SRSP</p>	<p>It remains a challenge to carefully and consistently review the use of some risk insurance proceeds. This is particularly important for parametric insurance proceeds, which may not be linked to any specific asset or to a specific programme (SRSP) that can channel resources to disaster-affected households.</p> <p>Contingency plans help define the potential use of insurance proceeds and ensure that agreement on their use is reached in advance. Government-led contingency planning has helped bring together disaster response actors – including international agencies and NGOs – to work on early warning, risk reduction, and disaster preparedness and response (World Bank, 2016a) and should now be used as a tool to ensure that rapid payouts reach the most vulnerable.</p>
<p>Awareness and capacity: disaster risk financiers and SRSP practitioners need better understanding and capacities in each other's respective disciplines</p>	<p>Outside of a few limited stakeholders, realizing the need for financial preparedness to manage disaster risks based on a clear understanding of the allocation of responsibility for disaster costs is a challenge. This is a multi-stakeholder initiative, yet there is limited capacity for sensitization of DRF and SRSP.</p> <p>Sustaining knowledge champions within a country to continue building understanding and buy-in has proven difficult given staff turn-over and the resources and time needed to provide on-going capacity building.</p> <p>Communication challenges and limited stakeholder engagement have allowed for the spread of misinformation and distrust around the issue.</p>
<p>Bureaucracy: programme and financial management structures and timelines need to be fully understood to ensure timeliness of support</p>	<p>In Niger and Senegal, the use of payouts from the ARC's drought risk pool for early response in 2015 was significantly delayed because funds were channelled through the National Treasury, which meant they were held up by the budget allocation cycle instead of being rapidly available to implementing agencies in charge of the drought response. These examples underscore the need for timely and flexible ways to channel resources to ensure that a flood early action system can deliver support quickly.</p>

<p>Appropriateness: review micro insurance for its appropriateness for the poorest</p>	<p>To make an insurance product sustainable in the long run, it is important that beneficiaries pay at least part of the insurance premium to foster greater risk awareness. Insurance may thus not be an appropriate solution for the poorest populations.</p> <p>Combining macroinsurance solutions, where the government pays for a premium with social safety nets, can be more appropriate when trying to target the ‘bottom of the pyramid’ poor – but transferring public resources to a private insurer may be politically challenging.</p>
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7.2.2 Opportunities

<p>Consolidate range of existing financial products for SRSP</p>	<p>Innovation in the past few decades has revolutionized the cost-effectiveness of DRF mechanisms. Innovations such as catastrophe risk modelling, creation of parametric insurance instruments for risk transfers and the convergence of traditional reinsurance markets and broader global financial markets have made it possible to transfer larger volumes of natural hazard risk to global markets more cheaply and effectively (UNESCAP, 2020).</p> <p>The sheer volume of financial products, their increasing accessibility and integration by governments and others into strategies is an opportunity for all stakeholders to improve the timeliness, efficiency and effectiveness of disaster responses, specifically as they relate to SRSP.</p>
<p>Expand and assess range of new financial products for SRSP</p>	<p>Despite the progress to date with new financial products transforming the financial sector, their application in DRF in the public sector is still only incipient.</p> <p>Parametric insurance instruments are now being tested for anticipatory financing tools that could trigger financial flows to support near-term preparedness in advance of a disaster occurrence.</p> <p>Anticipatory financing to trigger cash transfers as anticipatory responses should be further piloted and assessed, for example would cash transfers have been useful if targeted at people likely to be affected by a disaster and in need of support to evacuate and protect their possessions.</p>
<p>Use technology innovation to seek links between SRSP and disaster data</p>	<p>Risk modelling has brought together natural hazards science, engineering and actuarial mathematics to completely change the way that natural disaster risk is understood, managed and priced (UNESCAP, 2020).</p> <p>New technology and innovations have the potential to further enhance and boost systems for financial resilience against disaster shocks. New technology is likely to help make risks more understandable, improve the efficiency of existing solutions and new mechanisms being developed, and open up entirely new areas of engagement.</p> <p>The remote measurement or monitoring made possible by the latest satellite technology is enabling powerful new applications that will further support more accurate and timely financial decisions in response to shocks. For example, SEADRIF is now supported by a flood risk assessment tool that leverages the latest satellite technology to improve availability of risk information for governments (World Bank, 2019a).</p>

<p>Deepen government support and ownership of SRSP</p>	<p>While DRF strategies are increasing globally, there is a space for further expansion. New strategies should include a mix of financial instruments against disaster and climate risks, such as budgetary instruments, contingent credit and catastrophe risk transfers to increase the ownership, impact, and cost-efficiency of disaster response financing (World Bank, 2016a).</p> <p>Sovereign insurance for weather events is a high priority for governments and there is growing demand for DRF products and services. This is an opportunity to ensure links to SRSP are embedded in strategies and agreements about how resources can be channelled.</p> <p>The aim of any innovative DRF and shock-sensitive social protection initiative should be integration into government-led social protection systems. This would reflect the increasing role the government is already taking in managing and financing social protection cash transfer programmes generally. Tailoring the initiative to existing government capacities would be important.</p>
<p>Leverage high levels of donor support in SRSP</p>	<p>While donor support for ex-ante DRF and SRSP is reasonably strong and coordinated in the Asia-Pacific region, this has not translated into programming.</p> <p>The relevant multilateral development banks – World Bank and ADB for Asia-Pacific – have also demonstrated a strong commitment to support DRF initiatives, providing technical assistance and regional risk pool capitalization as well as premium financing.</p> <p>New initiatives such as the Insuresilience Partnership could be accessed for technical as well as financial support for developing SRSP.</p>
<p>Maximize use of new knowledge products to strengthen SRSP</p>	<p>New World Bank and ADB diagnostic toolkits for practitioners are now available to assess the DRF landscape in countries and to determine relative strengths and weaknesses. This will provide the basis for new or deepened engagements on DRF by international partners, as part of the broader disaster risk management and/or public financial management dialogue. It will also enable governments to assess their level of financial protection against disasters and provide an overview of current policies and mechanisms for financial protection, will serve as a foundation for identifying specific gaps and setting policy priorities for implementing reforms and introducing new financial instruments to strengthen financial resilience.</p>
<p>Use discussions on DRF for social protection as gateways to public goods</p>	<p>Regional risk pools, in particular, have been shown to facilitate regional policy dialogue and improve collaboration between participating countries and donors on risk reduction and risk management. They offer a vehicle to anchor financial planning, contingency planning, ownership of and collaboration on the disaster risk management agenda between and within countries and agree risk-informed investments (SRSP).</p> <p>It is increasingly recognized that linking financial instruments, including risk pools, to pre-agreed post-disaster programmes such as SRSP programmes can help ensure that funds are efficiently channelled to support targeted post-disaster responses (World Bank, 2016a). This needs to translate into action and commitment at national and regional levels.</p> <p>Disaster financing discussions can also drive development of public goods such as improved insurance literacy, institutional capacity, disaster risk data and modelling capacity.</p>

**7 CONSIDERATIONS FOR FUTURE FINANCING OF SRSP**

<p>Consider innovations for expanding the role of non-traditional stakeholders in DRF</p>	<p>The ARC has recently started offering international organizations and other humanitarian agencies the opportunity to purchase “replica coverage” — coverage that replicates the insurance policy purchased by the ARC member state in which the agency is active. Through this approach, humanitarian actors may access market risk capital to cover costs related to humanitarian action in specific countries (World Bank, 2016a). In fact, this approach is already being considered with the SEADRIF facility, as evidenced by a recent Red Cross assessment (RCRCCC, 2020), commissioned by the World Bank and IFRC for Myanmar and the Philippines.</p>
<p>Ensure that disaster risk financial products are ‘attached’ to a delivery programme</p>	<p>While disaster funds can be released early, it is frustratingly common for post-disaster support and reconstruction to be delayed by months, simply because of a lack of clarity about how resources can best be used. Delays can result from multiple causes, including a lack of clearly defined programmes through which to channel resources, lack of clarity concerning responsibilities and accountabilities, and procurement issues. This provides opportunities for development partners to engage in these areas to ex-ante address bottlenecks and improve accountability.</p>
<p>Increase public awareness of disaster risks and financing for SRSP</p>	<p>The public’s knowledge around disaster risks and the need to secure financial protection against those risks is a key priority for many economies. Building knowledge and awareness of disaster risks is critical for life-saving work, but also to provide the level of demand for (public or private) insurance that is necessary for many types of risks (OECD, 2019).</p>



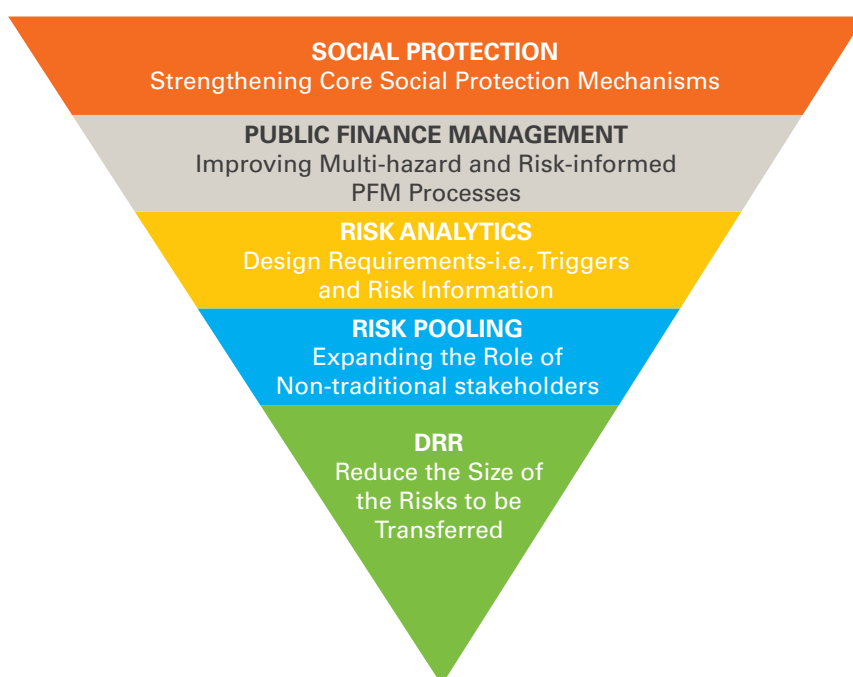
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# 8 POLICY RECOMMENDATIONS FOR LINKING DRF AND SRSP IN EAST ASIA AND PACIFIC

This section presents a battery of actionable recommendations and entry points for addressing the constraints and barriers for linking SRSP to DRF in the EAP region. They are the result of several consultations with experts, including from ASEAN. The resulting policy recommendations are clustered around five blocks – in order of priority from top to bottom – that will conform

the regional agenda for the coming years (see Figure 11): (i) strengthening core social protection mechanisms, (ii) improving risk-informed PFM processes, (iii) working out SRSP design requirements, (iv) expanding the role of non-traditional stakeholders in DRF and (v) reducing the size of the risks to be transferred.

**Figure 11** Five critical agendas for East Asia and Pacific



Source: Authors.

Prioritize building and institutionalization of SRSP by strengthening core social protection mechanisms and investing in foundational operational systems:

1. **Ensure that building functioning SRSP systems is at the front and centre of the policy agenda for ASEAN.** Risk financing is necessary, but strong ‘core’ social protection systems with robust shock-responsive features are essential. Without robust delivery systems, and specifically delivery systems geared towards shock responses, any financing in place is bound to be ineffective. Similarly, without appropriate institutionalization in country policy frameworks, any successes in setting up SRSP systems will be fleeting. Countries in the region must define a set of ‘minimum requirements’ – scalable systems for targeting, enrolment, social and beneficiary registries, payments and grievance redressal – to enable social protection to absorb DRF and deliver emergency assistance. Countries must also ensure they have in place integrated data management protocols – that is how data is collected, analysed, stored, exchanged and used for deciding programmatic interventions and understanding impacts – as the backbone of any social protection system.
2. **Countries will require alternative sources of financing that can support the development of core and SRSP systems in advance.** Innovative sources of financing might need to include climate financing and international funds, but also more orthodox alternatives such as increasing the tax base and expanding contributory or hybrid (multi-tiered) social protection systems. We recommend additional research on how these sources of financing can be leveraged for SRSP, including on strategies to establish the conceptual building blocks to financing social protection through climate funds. It is still unclear how to best tackle the political economy issues arising from the global financing mechanisms of the green economy.
3. Countries in the region are now in the process of developing risk financing strategies, as well as developing and operationalizing social protection roadmaps and policies. It is likely that COVID-19 will propel this effort forward.

**There is a need for ‘alignment’ between DRF mechanisms and social protection responses.** Social protection mechanisms form an essential part of, and need to be ‘integrated’ within, the design of DRF instruments. In addition, SRSP strategies need to make provisions for the financing of shock responses. There is an important need for ASEAN members to focus on improving linkages across DRF, PFM and SRSP at policy and institutional levels in order to enable operationalization of existing plans and strategies. To begin with, the essential coordination between the DRM and social protection institutions is a precursor for effective SRSP, where it is presumed that both systems are relatively strong. The roll out of ASEAN guidelines on disaster-responsive social protection represents an opportunity to crystalize some of these recommendations. As such, there is a need for ASEAN countries to undertake costing exercises to underpin the disaster risk financing strategy for social protection scale up.

4. **Use the experience of COVID-19 as a springboard for improving risk financing of SRSP, but not as a model.** The responses to COVID-19 were built on ad hoc legal and financial instruments, and pre-existing DRF instruments were not significantly utilized. Moreover, COVID-19 responses were almost entirely financed by instruments that should not be the first line of response for such large-scale risks – risk retention, instead of risk transfers. Thus, going forward, the goal is not necessarily to replicate the financing arrangements that were put place for COVID-19, but to use what has been built as an opportunity to improve the systems.

Efforts by regional actors should be more focused on overall financing institutionalization, especially improving multi-hazard and risk-informed PFM processes, and linking those to social protection:

5. **Improve the efficiency and transparency of risk retention instruments, especially budgetary ones.** There is a strong focus on risk transfers in the DRF agenda in the region, but countries mainly use risk retention instruments. This is unlikely to change drastically in the coming decade, as countries

are unlikely to develop a sophisticated range of risk transfer instruments in the short term. More importantly, given that most risks that countries are exposed to tend to be manifested in localized shocks, risk retention instruments might be more appropriate for dealing with those types of risks. Hence, more focus is needed on exploring how to finance risk retention instruments more sustainably, and to track and cost those expenditures in order to understand the overall efficiency of financing from risk retention versus risk transfer instruments. It is also important to improve existing mechanisms. For instance, dedicated funds already exist and more work should go into making them more efficient, including defining clear rules and regulations. Instead of relying on budget revisions to finance emergency responses, identifying alternative financing sources in advance offers greater potential.

6. **Improve the flow of funds and PFM disaster arrangements in order to increase the utilization of funds.** Despite a lack of sufficient risk financing, funds go unused in emergencies because of barriers in spending rules, or difficulties created by expenditure controls. On the other hand, transparency in the utilization of funds could be more stringent. In order for disaster responses to be more effective, significant efforts will need to go into improving the efficiency of existent pre-arranged instruments and PFM regulations. It is essential to clarify funding rules for DRM plans - ideally through a DRF strategy process, but at least within current arrangements.
7. **Focus on improving the availability of financing, flow arrangements and delivery systems at the local level, where the vast majority of shocks occur.** Sub-national levels of government are essential in responding to both large and localized shocks. Countries must invest in making financing rapidly available at the local level, but also in delivery structures – including through social protection – that have the capacity to respond to shocks. This includes investing in financial mechanisms at the local level, but also overall institutionalization of PFM arrangements, capacity building and delivery systems. One important avenue that might be explored is

the development of financing instruments for local-level use – risk transfers and local funds. This entails ensuring governments start paying attention to risk ownership at different levels, not only how to transfer risk ‘off the balance sheet’.

8. **Think beyond expenditure and disbursement to understand risk-informed PFM.** Countries in the region should start enhancing budget tagging and expenditure tracking mechanisms to assess and account for multi-sector investments – linked to prevention, disaster risk reduction, preparedness, response and recovery – including investments in SRSP.

To successfully adopt risk finance principles that enable sustainable financing, countries will need to fulfil the minimum SRSP design requirements, particularly around triggers and risk information:

9. **Explore options to develop risk financing instruments and mechanisms that suit the response needs of a social protection approach.** SRSP is not expected to supplant disaster responses and the interventions are not only different in design, but also in timeliness social protection responses that might need financing over longer periods of time and all financing might not be needed immediately. It will be important to explore how financial instruments and arrangements can be tailored to the type of responses needed through social protection. This does not necessarily mean that SRSP should have separate budgeted disaster funding, but flexibility needs to exist to add financing to well-designed shock-responsive ‘regular’ programmes from DRF sources as and when needed.
10. **Quantitative, probabilistic risk assessments should form the basis of risk prioritizations and the development of any SRSP strategy.** Where unavailable, these should be developed. Countries need to strike a balance between considering funding and instruments in isolation and understanding and addressing compound risk from coterminous events. Broadening the understanding of risk underpinning SRSP might require a comprehensive and integrated risk and vulnerability analysis that includes compound event analysis. This means surveillance

monitoring and impact analysis that can quantify multiple dimensions of risk more comprehensively, coupled with national SRSP strategies and accompanying financing plans that link to their overall country's risk financing plans. Countries in the region will require enhancing capacities for disaggregated disaster impact data collection, analysis and application for understanding vulnerabilities and how social protection can support disaster risk reduction beyond response and recovery.

- 11. Humanitarian innovations, such as anticipatory action, should be used to improve the risk analytics around disasters at a larger scale.** Given the key importance of trigger design in enabling DRF mechanisms, where possible they should be employed using objective and timely data that are resistant to manipulation and available over a certain time horizon. Yet, the risk analytics and costing of DRF needs to go beyond the current narrow focus of risk transfer and have a more comprehensive view on a suite of instruments and financing. The use of risk analytics and the development of triggers through initiatives like forecast-based financing can be extremely useful in the development of more risk-informed response systems in the region.
- 12. Anticipatory action should be equally used to leverage additional pre-arranged financing, while linked to social protection.** Countries should leverage the popularity of new humanitarian approaches in the region, such as DRF and anticipatory action, to attract investment in DRM. Yet, there is also a need to test such approaches at scale, and to demonstrate how the financing of trigger-based early action protocols could work in large disasters at a wider scale. In the same vein larger-scale, pre-arranged financing needs to be in place for more impactful responses. In the context of larger early action and response systems, humanitarian and international agencies in the region should continue to explore concrete efforts to operationalize linkages with SRSP. The link to humanitarian financing and actors needs to be acknowledged as part of a joined-up approach that can address

a complete breakdown of state capacity in a given time, such as a one-in-100 year event like Typhoon Haiyan in the Philippines or more recently, the socio-political crisis in Myanmar.

Consider innovations for expanding the role of non-traditional stakeholders in regional DRF for social protection:

- 13. Use regional risk pools as an opportunity to facilitate regional policy dialogue and improve collaboration between participating countries and donors on risk reduction and management.** While it is increasingly recognized that linking financial instruments, including regional risk pools, to pre-agreed post-disaster programmes such as SRSP can help ensure that funds are efficiently channelled to support targeted post-disaster responses, this needs to translate into action and commitment at national and regional levels. Yet, while efforts to support risk transfers and risk pools are important, international and regional agencies could also support investments in, and capacity building on, developing a wider range of instruments, helping countries understand and improve the flow of funds and supporting interventions that strengthen linkages with SRSP.
- 14. Start by ensuring that where regional disaster risk financial products exist, they are 'attached' to a delivery programme.** The magnitude of a regional risk pool benefits such as SEADRIF's for example, depends crucially on whether the payouts provide insurance to government against its contingent liability from a well-functioning social protection scheme that automatically scales in years of intensified impacts from natural disasters. SEADRIF-participating countries might also consider experimenting with the facility as a development insurer to allow humanitarian actors to access market risk capital to cover costs related to humanitarian cash transfers – by giving humanitarian agencies the opportunity to purchase “replica coverage”. The added value is in experimenting with more predictable sources of finance and how this predictability can in turn improve preparedness for disasters to protect welfare gains.



Reducing the size of risks to be transferred also shrinks the cost of transferring the risk. Focus therefore on disaster risk reduction, rather than response:

**15. Risk financing instruments should include provisions to reduce risks in advance.** Most countries continue to be reactive by focusing on disaster response rather than taking

a multi-hazard risk approach to disaster risk reduction. Countries need to address prevention and anticipation together, through comprehensive programmes, investing in both simultaneously, and linking pre-existing investments and funding streams. DRM and SRSP policies and programmes in-country should aim to decrease poverty and vulnerability as a key way of reducing risks.



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# ANNEX A. Glossary

**Catastrophe bonds (cat bonds):** Bonds are issued by national and local governments, other quasi-public organizations as well as large companies to finance investment. In exchange for the payment of the bond by the purchaser, the issuer agrees to pay the purchaser interest payments on a set schedule and repay the principal at maturity. As such, they are a form of debt instrument. Catastrophe bonds are short-term bonds (three to five years) issued by a sponsor to investors in the capital markets. However, in contrast to normal bonds, they are 'triggered' by a catastrophe. Once triggered, the bond sponsor maintains a portion of the principal and consequently investors lose a portion of principal and interest payments. In this way, they transfer natural catastrophe risk to investors. The bond issuer will typically be a state or large infrastructure owner. Insurers, reserve funds or risk pools might also issue catastrophe bonds as an alternative to purchasing reinsurance, to lessen their risk exposures. They can be attractive instruments for investors as cat bond risks are uncorrelated with other risks investors face.<sup>18</sup>

## **Catastrophe Deferred Draw-Down Option**

**(CAT-DDOs):** The development policy loan with a CAT-DDO is a contingent financing line that provides immediate liquidity to countries to address shocks related to natural disasters and/or health-related events. It serves as early financing while funds from other sources, such as bilateral aid or reconstruction loans, are being mobilized (Yeo & Navarro-Martin, 2018). This product allows countries to borrow up to the lower of US\$250 million or 0.5 per cent of GDP (IDA countries) or US\$500 million or 0.25 per cent of

GDP (IBRD countries) in the event of a state of emergency being declared by the country. The draw-down period for the loan is three years, renewable up to four times. The interest rate on the loan is the same as for regular IDA/IBRD loans, with no front-end fees or renewal fees (IDA countries)/0.5 per cent front-end fee and no renewal fees (IBRD countries). The product is available only to countries that have, or are preparing, a satisfactory DRM plan, which the World Bank monitors on a periodic basis.<sup>19</sup>

**Contingent credit/loans:** A loan that, in advance of a disaster, it is agreed will be made available on specified terms following a disaster, if the disaster's severity meets or exceeds a certain threshold (trigger). They are made available contingent on a particular event or level of damage being incurred. They are typically provided by international finance institutions to sovereign governments. These institutions often only allow sovereigns to sign up for a contingent loan if they have a disaster risk management plan.<sup>20</sup>

**Contingent liability:** A liability that may occur depending on the outcome of an uncertain future event. Explicit contingent liabilities are contractual commitments to make certain payments if a particular event occurs – the basis of these commitments can be contracts, laws, or clear policy statements. Implicit contingent liabilities are political or moral obligations to make payments, for example in the event of a crisis or disaster – governments do not recognize these liabilities until a particular event occurs. Implicit contingent liabilities are difficult to assess, let alone manage in a consistent manner, precisely because of their implicit nature.<sup>21</sup>

<sup>18</sup> Conor Meenan *et al.*, 'Disaster Risk Finance - a Tool Kit' (GIZ ACRI+ Commissioned Report, May 2019), [https://www.indexinsuranceforum.org/sites/default/files/Publikationen03\\_DRF\\_ACRI\\_DINA4\\_WEB\\_190617.pdf](https://www.indexinsuranceforum.org/sites/default/files/Publikationen03_DRF_ACRI_DINA4_WEB_190617.pdf)

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Centre for Disaster Protection.

**Disaster:** A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.<sup>22</sup>

**Disaster risk financing (DRF):** It covers the system of budgetary and financial mechanisms to credibly pay for a specific risk, arranged before a potential shock. This can include paying to prevent and reduce disaster risk, as well as preparing for and responding to disasters.<sup>23</sup>

**Disaster risk management (DRM):** The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies, and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.<sup>24</sup>

**Emergency** is sometimes used interchangeably with the term “disaster”; as, for example, in the context of biological and technological hazards or health emergencies, which, however, can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.<sup>25</sup>

**Ex-ante financing:** This refers to financing agreed in advance of an event, which will be available to spend once an event occurs.<sup>26</sup>

**Ex-post financing:** This refers to money and cash agreed once the event has taken place.<sup>27</sup>

**Humanitarian financing:** Humanitarian financing ‘refers to the financial resources for humanitarian action spent outside the donor country based on what donors and organizations report as such and does not include other types of financing to address the causes and impacts of crises referred to as crisis-related financing’.<sup>28</sup>

**Indemnity insurance:** A (re)insurance contract which pays out compensation worth the ultimate net loss of a specific asset. This type of insurance can be useful in protecting high-value assets such as homes, where there is a relatively narrow scope of potential loss. Insurance payouts are determined based on an assessment of losses after an event has occurred.<sup>29</sup>

**Parametric insurance:** A type of insurance that does not indemnify the pure loss, but agrees before the event to make a payment upon occurrence of a triggering event.<sup>30</sup>

**Public Finance Management:** Refers to the set of laws, rules, systems and processes used by sovereign nations (and sub-national governments), to mobilize revenue, allocate public funds, undertake public spending, account for funds and audit results. It encompasses a broader set of functions than financial management and is commonly conceived as a cycle of six phases, beginning with policy design and ending with external audit and evaluation.<sup>31</sup>

<sup>22</sup> UNDRR, ‘UNDRR - Terminology’, accessed 5 August 2021, <https://www.undrr.org/terminology/disaster>

<sup>23</sup> CDP, ‘Centre For Disaster Protection — Glossary of Terms’, Centre For Disaster Protection, accessed 5 August 2021, <https://www.disasterprotection.org/glossary>

<sup>24</sup> Daniel Clarke and Stefan Dercon, ‘Dull Disasters? How Planning Ahead Will Make a Difference’ (Oxford, UK: The World Bank, 2016), <http://documents.worldbank.org/curated/en/962821468836117709/pdf/106944-PUB-add-isbn-PUBLIC-9780191088414.pdf>

<sup>25</sup> UNDRR, ‘UNDRR – Terminology’.

<sup>26</sup> Daniel Longhurst *et al.*, ‘What Are Future Financing Options for Shock Responsive Social Protection?’ (United Kingdom: Social Protection Approaches to COVID-19 Expert Advice Service (SPACE), DAI Global Ltd, May 2021), <https://socialprotection.org/discover/publications/space-what-are-future-financing-options-shock-responsive-social-protection>

<sup>27</sup> Ibid.

<sup>28</sup> Development Initiatives (pp 81, 2020) as cited in Longhurst *et al* 2021.

<sup>29</sup> CDP, ‘Centre For Disaster Protection — Glossary of Terms’.

<sup>30</sup> Clarke and Dercon, ‘Dull Disasters? How Planning Ahead Will Make a Difference’.

<sup>31</sup> GSDRC, ‘Public Financial Management’, GSDRC, accessed 5 August 2021, <https://gsdrc.org/professional-dev/public-financial-management/>

**Risk layering:** This involves combining risk retention instruments for high-probability, low-impact events with risk transfer instruments for the lower probability, higher impact events. As a rule of thumb, an economic and pragmatic approach aims to reduce risk first, then arrange risk retention, and finally transfer risk. A risk-layering strategy can reduce costs and improve the reliability of funding.<sup>32</sup>

**Risk pooling:** Risk pools are structures where a selection of organizations (typically administrative units) come together to purchase insurance. The pool effectively becomes the ‘captive insurer’ (the bespoke insurance company) for the units in question. The pool retains some of the risks itself and transfers other risks through reinsurance, or other instruments, to third parties. The pool is able to purchase insurance more cheaply than if its members purchased it individually, as it offers a more diversified risk portfolio, and because of economies of scale and greater buyer power. Pool membership may be conditional on having a disaster response plan. Risk pools typically use parametric triggers, allowing pay-out within one to two weeks, making them suitable instruments for providing liquidity during the response phase of a disaster.<sup>33</sup>

**Risk retention:** After an event has occurred, some costs can be financed directly by the risk holder using funds that are readily available. Risk retention mechanisms are a relatively reliable source of funds and are most appropriate to support more frequent disaster costs, such as those expected to occur every 10 years or less. Risk retention mechanisms have longer term cost implications, in that the costs are held and repaid by the risk holder, potentially for years after an event has occurred.<sup>34</sup>

**Risk transfer:** For lower-frequency higher-severity disasters, it is relatively more uneconomical to use risk retention mechanisms. Risk transfer mechanisms remove a portion of disaster risk in return for an annual premium payment. As such, they redistribute the infrequent and unmanageable total cost of disaster into an equivalent manageable annual cost (premium). After an event, if the payment terms of the instrument are met, funds are paid by the risk transfer provider to the risk holder.<sup>35</sup> Examples include market-based insurance, reinsurance, risk pools, derivatives, and cat bonds.

**Shock-responsive social protection:** Standard social protection systems are set to respond to these individual or household-level shocks. A SRSP system is also prepared to respond to covariate or systemic shocks that affect a large number of households simultaneously—be they natural disasters, food shortages, economic crises or disease outbreaks such as COVID-19.<sup>36</sup>

**Shock:** The word ‘hazard’ in DRM terminology tends to focus on climate- and weather-related events. The word ‘shock’ is used in social protection literature as a wider term that denotes the wide array of events (natural, economic, epidemiological, conflict-based) that households, governments, and humanitarian and social protection systems aim to address.<sup>37</sup> It can be seen as the realization of risk that can lead to losses or negative outcomes. Shocks can affect the individual or household (idiosyncratic) or a large number of people simultaneously (covariate).

<sup>32</sup> Meenan *et al.*, ‘Disaster Risk Finance - a Tool Kit’.

<sup>33</sup> *Ibid.*

<sup>34</sup> *Ibid.*

<sup>35</sup> *Ibid.*

<sup>36</sup> UN DESA, ‘COVID-19 and a Primer on Shock-Responsive Social Protection Systems’, UN Department of Economic and Social Affairs (DESA) Policy Briefs (United Nations, 31 July 2020), <https://doi.org/10.18356/d86c6aa0-en>

<sup>37</sup> TRANSFORM, ‘TRANSFORM Manual on Shock-Responsive Social Protection’, accessed 5 August 2021, <https://socialprotection.org/connect/communities/social-protection-crisis-contexts/documents/transform-manual-shock-responsive>

**Social protection:** Is commonly understood as all public and private initiatives that provide income or consumption transfers to the poor, protect the vulnerable against livelihood risks and enhance the social status and rights of the marginalized with the overall objective of reducing the economic and social vulnerability of poor, vulnerable and marginalized groups.<sup>38</sup> It typically includes social assistance (non-contributory, predictable transfers including cash transfers, social pensions, child grants and school feeding programmes), social insurance (contributory programmes including contributory pensions, health, unemployment, or disaster insurance and funeral assistance) and labour market policies (active or passive interventions such as training programmes, job centres, and wage subsidies).

**Social registries:** Information systems that support outreach, intake, registration, and determination of potential eligibility for one or more social programmes. They have both a social policy role as inclusion systems, and an operational role as information systems.<sup>39</sup>

**Triggers:** A trigger is a pre-defined threshold of an index underlying a risk finance mechanism, which,

if exceeded, prompts a pay-out. A trigger may also leave an element of discretion to a designated party about whether or not to launch a response activity.<sup>40</sup> A trigger is a pre-defined probability and magnitude of disaster risk which activates anticipatory action in a given area.

**Virements:** Movements of budgetary resources between line ministries, programmes, policy areas, expenditure categories or line items. Virements (a) take place after the budget has been authorized by the legislature, (b) do not affect the total level of budgeted expenditure, (c) should not fundamentally alter the composition of expenditure appropriated by the legislature, and (d) are carried out under the executive authority of the government and do not require legislative authorization. Virements need to be distinguished from in-year reallocations of budgetary appropriations that fundamentally alter the allocation of expenditure appropriated by the legislature and therefore require its approval through a supplementary budget. Virements also need to be distinguished from reprioritization of expenditure between budgets, which happens as part of the formulation of the next year's budget and can fundamentally alter the allocation of expenditure from one year to the next.

<sup>38</sup> Stephen Devereux and Rachel Sabates-Wheeler, 'Transformative Social Protection' (IDS, 2004), <http://www.ids.ac.uk/publication/transformative-social-protection1>

<sup>39</sup> Pereira Guimaraes Leite et al., 'Social Registries for Social Assistance and beyond : A Guidance Note and Assessment Tool' (The World Bank, 1 July 2017), <http://documents.worldbank.org/curated/en/698441502095248081/Social-registries-for-social-assistance-and-beyond-a-guidance-note-and-assessment-tool>

<sup>40</sup> CDP, 'Centre For Disaster Protection — Glossary of Terms'.

# ANNEX B. Research questions and methodology for the regional landscape analysis in Southeast Asia

The regional landscape analysis aimed to answer the following research questions:

1. What are key factors that enable or hinder the financing of SRSP in ASEAN countries?
2. What are key lessons learned from recent experiences of SRSP in the region, including disasters and large shocks driven by natural hazards as well as COVID-19?
3. To what extent can these lessons be applied to the financing of SRSP in the future?

To a lesser extent, the study also aimed to contribute to: (i) translating lessons from COVID-19 responses to the design and implementation of financing of SRSP in general, (ii) informing the development of coherent regional policies for financing SRSP and (iii) informing linkages between SRSP and humanitarian instruments.

To answer these questions, the study analysed a series of factors across DRF, PFM and SRSP and how they influence effective financing and delivery of SRSP.

The study was conducted through a rapid review of experiences from the majority of ASEAN countries in the aftermath of the COVID-19 crisis and other

large shocks, and an in-depth analysis of two countries selected during the inception phase. The findings are, therefore, not representative of the entire ASEAN region, but illustrate key lessons learnt from across the region with a focus on the case study countries.

The two in-depth country cases were conducted through an extensive document review and remote key informant interviews in Indonesia and the Philippines. The regional review was primarily conducted through a limited desk review process and a 'country profile' sheet that was filled out with support from UNICEF country offices. A limited number of consultations were also conducted at the regional level.

The research was affected by limitations imposed due to the requirement to undertake work remotely, arising from the ongoing COVID-19 pandemic. The regional review was conducted as a rapid review and heavily relied on information gathered with help from UNICEF's country offices. Information could not be collected from all countries: Brunei and Singapore were excluded from the study given their high-income country classification. Myanmar was not included in the final regional review, given the limited information available and the uncertainty around the continuation of previous policies and programmes following a coup in February 2021.

## Key areas of research analysis

### 1. DRF

- Policies and institutions that are conducive to the effective financing of responses to shocks.
- A DRF strategy that includes:
  - risk analytics that provide an assessment and quantification of the potential impacts of disasters
  - sources of funding and financial instruments that serve to finance disaster response and that are arranged in advance
  - funding release plans that include:
    - triggers or thresholds
    - roles and responsibilities
    - disbursement channels.

### 2. PFM

- Pre-arranged disaster PFM mechanisms established in advance to set out specific budgetary procedures and responsibilities that can be adopted in the context of a disaster.
  - Budget flexibility to allow for adjustments to the rules that enable a timely response.
  - Expenditure controls to balance the demands of an urgent and timely response with the need for a high degree of transparency and accountability.
  - Expenditure reporting to ensure up-to-date information is provided to decision-makers on the progress of implementation and what remedial action may be required.
  - Fund disbursement tools that can help speed-up payments to delivery units.
- 
- Institutional coordination with DRM and humanitarian action to ensure complementarities.
  - Links between social protection and the DRF strategy to ensure that social protection is included as a specific strategy within the DRM strategy and associated DRF strategy.
  - Risk and beneficiary data and systems to make it possible to quickly scale-up support to existing beneficiaries and identify new beneficiaries.
  - Protocols for early action and disaster response that are specific or clearly delineated for SRSP.
  - Policy and programme design flexibility both to create new programmes and to tweak existing ones in order to better meet the needs.
  - Payment and delivery systems for delivering funds directly to the most affected households.
  - Transparency, communication, and feedback loops to improve the transparency and accountability of disaster-related social protection benefits.



# ANNEX C. Areas for further research

DRF and SRSP should be based on solid evidence, research and data. We need to maximize the opportunity of the design and implementation of new initiatives to generate new evidence on impact, efficiency and effectiveness.

Given that DRF and SRSP is still a relatively new area of practice, there are a number of areas where further research and analysis are required.

A non-exhaustive list of those research areas is as follows:

1. Research into the comparative benefits of different risk financing initiatives for different delivery programmes would be valuable.
2. Given that humanitarian leaders have recently been “enthusiastic” about the possibility of CERF funds being channelled through national social protection systems (Pichon, 2019), consider discussions with UN members in-country regarding ex-ante planning for how CERF resources could be channelled through national social protection programmes.
3. There is little evidence to date on the benefits of delivering cash early – as opposed to during or after a crisis – in terms of relieving suffering and saving lives. Efforts to work through national protection systems should be accompanied by research that tracks the impacts of early action. Research on whether the ex-ante cash transfer is more beneficial than a transfer after the event can be done when new programmes are designed and implemented. An ODI study on the potential for scaling-up forecast-based financing in Bangladesh outlines a methodology that can be used for this purpose. It examines what measures people can take with the early cash, and how much lead time is needed (Tanner *et al.*, 2019).
4. Expanding financial protection strategies from natural disasters to cover other crises and complex risks. In theory, the principles of DRF and SRSP apply to other shocks, such as forced displacement, economic shocks and even conflict. However, little empirical evidence is available on this, and further examination is necessary.
5. Growing financial protection policies and instruments against interconnected risks, such as natural disaster-induced displacement and health shocks. There is little evidence around how social protection systems could work more closely with/learn from other shock-responsive systems, such as health response systems.







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**UNICEF East Asia and Pacific Regional Office**  
19 Phra Atit Rd, Chana Songkhram,  
Pra Nakhon, Bangkok, 10200, Thailand

Email: [eaprosocialpolicy@unicef.org](mailto:eaprosocialpolicy@unicef.org)

Website: [www.unicef.org/eap](http://www.unicef.org/eap)

Facebook: [www.facebook.com/unicefeap/](http://www.facebook.com/unicefeap/)

Twitter: [@UNICEF\\_EAPRO](https://twitter.com/UNICEF_EAPRO)

