



# Climate change, intersecting disasters and social protection:

How the COVID-19 experience can prepare us for the future



# Working paper

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Covid jabs, remote areas, Philippines: (Photo: PRCS)



## Executive summary

As the COVID-19 pandemic continues to unfold around the world, the impacts of climate change-related shocks are leading to intersecting disasters. Throughout these crises, social protection (SP) tools have emerged as important instruments in responding to the socio-economic impacts of COVID-19 as well as climate-related disasters, as these events overlap and exacerbate impacts in complex ways.

This working paper considers COVID-19 alongside concurrent climate-related disasters and explores the use of novel SP tools, programmes and systems in international responses to the pandemic. In this paper, these SP tools are evaluated for their potential efficacy in future responses to manage the impacts of complex climate-related disasters. Recommendations are also provided on potential developmental priorities and areas for further research. The objective of the paper is to present the ways in which COVID-19, intersecting with climate-related disasters, could be a precursor of what's to come. It reiterates that we need to learn from the COVID-19 experience to design better SP tools for future intersecting disasters.

A key response to the physical and economic challenges of COVID-19 has been the rapid expansion of existing SP systems or the creation of parallel programmes to complement existing ones. Although many measures were short-term, some programmes were designed for use beyond the pandemic. Evidence presents a strong relationship between pre-existing SP systems and the speed of programme expansion. In addition, there were observable differences in SP between regions and income groups, with high-income countries leaning towards an even mix of social assistance, social insurance and labour market policies, while lower- and lower-middle-income countries relied more on social assistance programmes.

While the speed with which SP responses have been internationally adopted and implemented during the pandemic has been encouraging, several challenges have emerged. These include the inability to meet coverage and demand, especially when providing for informal sector workers and vulnerable groups and considering technical/logistical limitations. Meeting coverage and demand proved to be an obstacle as more and more people needed support. Furthermore, the coverage of informal sector workers, non-state citizens and vulnerable groups was hindered due to a lack of institutionalized mechanisms and low levels of financial inclusion. In addition to coverage, rapid targeting processes resulted in exclusion errors along indicators of marginality. Furthermore, achieving transformation and lasting reductions in vulnerability were difficult, due to the preference for short-term and one-off, rather than long-lasting, permanent assistance schemes. Lastly, technical barriers, including the need for up-to-date databases of vulnerable households, especially in data-poor countries, have been challenging. The understanding of vulnerability, based on poverty indices instead of more dynamic measures of vulnerability, restricted the identification of those in need during intersecting disasters.

The paper finds that there is limited attention paid to the impacts and management of intersecting disasters – from both the disaster response and SP sectors. This points to a significant gap in current understanding of how to manage the future shocks from climate-related hazards, which are likely to involve increasingly complex, multi-dimensional impacts from compounding risks. However, despite a lack of evidence, intersecting disasters present new institutional, operational and logistical challenges and it is likely that their compounded impacts have created significant problems around the world. This analysis is supported within the paper with detailed case studies from India and the Philippines – two countries with high rates of COVID-19 and climate-related disasters.

To date, the pandemic has revealed inadequacies in the siloed disaster management approaches that are predominant in shock-responsive SP. The challenges in meeting the needs of rapidly increasing numbers of vulnerable people across different groups have important implications for the increasingly important role of SP in response to intersecting shocks. Other critical insights around financing, universal approaches to SP, and the role of SP in a context of increasing climate risks have also emerged.

This paper identifies areas for further research and operational improvements, including:

- focusing on multi-hazard approaches to shock-responsive social protection
- enabling innovative coordination across disaster response, SP, health, and humanitarian agencies within countries and between state and non-state bodies
- encouraging collaborative approaches to ensure that responses are positively, rather than negatively reinforcing
- integrating financing mechanisms where possible to be flexible, sustainable and sensitive to climate change adaptation and mitigation targets
- designing and implementing more long-term and durable SP responses to the complex risks arising from climate change
- exploring universal measures to deal with the impacts of compound risks and intersecting disasters.

# Table of contents

Executive summary	3
Introduction	6
Methodology and scope	7
Climate change, intersecting disasters and COVID-19	9
Climate change and COVID-19	9
Climate-related disasters in 2020	10
Social protection responses to intersecting disasters and COVID-19	14
Social protection and COVID-19: A rapid review of responses and challenges	14
<i>Nature, scope and differences across regions</i>	14
Challenges faced by social protection responses to COVID-19	16
<i>Meeting coverage and demand</i>	16
<i>Providing for informal sector workers, non-state citizens and vulnerable groups</i>	16
<i>Achieving transformative and lasting reductions in vulnerability</i>	17
<i>Technical innovations and challenges</i>	17
Case Studies: India and the Philippines' experience with intersecting disasters in 2020	19
<i>Climate-related disasters in 2020</i>	19
<i>Intersection with COVID-19</i>	20
<i>Social protection responses</i>	24
<i>Lessons learned from India and the Philippines</i>	28
The role of social protection for compound climate risks: Key insights and way forward	31
Key insights	31
<i>Areas for further research and operational improvements</i>	34
Conclusion	35
Appendix A: Online resources	36
<i>Data dashboards</i>	36
<i>Data repositories used to build the interactive dashboard</i>	36
References	37
Figure 1: Climate-related disasters between 11 March and 15 December 2020 by disaster type	1
Figure 2: COVID-19 cases and disasters, India	21
Figure 3: Daily COVID-19 rates and climate-related disaster impacts, India	22
Figure 4: Daily COVID-19 rates and climate-related disaster impacts, the Philippines	22
Figure 5: Social protection responses by type, India	25
Figure 6: Social protection type and function as percentage of total, India	25
Figure 7: Social protection responses by type, the Philippines	26
Figure 8: Social protection type and function as percentage of total, the Philippines	26
Table 1: Number of people affected and killed by climate-related disasters	12
Table 2: Number of people affected and killed by climate-related disasters, by country	12
Table 3: Regional extreme heat events overlapping with the COVID-19	12
Table 4: Disaster impacts in 2020, India	19
Table 5: Disaster impacts in 2020, the Philippines	20





# Introduction

**While the COVID-19 crisis has unfolded over the last year or more, the impacts of climate change have continued to be felt around the world in the form of climate-related shocks, creating intersecting disasters.** The COVID-19 pandemic continues to have pronounced socio-economic and public health impacts, while climate change is concurrently putting more and more people in the path of extreme weather events. This is leading to intersecting disasters with negative compound effects, especially for the most vulnerable people (Walton and Van Aalst, 2020). For instance, the year 2020 saw some of the most intense cyclones in the Asia-Pacific, while heatwaves in Europe were among the worst on record. The intersection of these events with the fallout from COVID-19 has resulted in widescale, complex impacts, with two or more distinct events overlapping in the same location. While the two crises – COVID-19 and the climate emergency – are multi-dimensional and evolve at different timescales, they provide one of the clearest examples to date of the harmful effects of compounding risks in the face of climate change, especially on the most vulnerable people.

**One increasingly important tool in the management of climate risks and disaster impacts is social protection (SP), as best exemplified in the responses to the socio-economic impacts of COVID-19 across the world.** SP is a series of policies, programmes and instruments intended to decrease and prevent poverty throughout an individual's life. These systems include contributory (social insurance) and non-contributory (social assistance) as well as labour market interventions such as public works programmes (ILO, 2017). SP interventions can help households cope with the immediate impacts of climate-related shocks by providing prompt support at times of crisis as well as support to reduce their vulnerability before disasters happen (Costella *et al.*, 2021). COVID-19 has seen the increased use of SP systems to respond to crises, proving to be an integral mechanism to prevent households from slipping into poverty. Over 90 per cent of all national responses to COVID-19 have involved some form of income protection or in-kind transfers aimed at addressing the socio-economic impacts of the pandemic on affected populations (ILO, 2020a). Indeed, these mechanisms have proved invaluable in responding to unforeseen compounding risks, alleviating some of the impacts posed by household income loss.

**The COVID-19 pandemic has presented an opportunity to re-think how SP systems can support disaster response in the face of increasingly complex risks and intersecting disasters arising from climate change.** Over the last 20 years, we have seen more of the climate-related disasters that have been predicted to increase in frequency and severity because of climate change, disproportionately affecting those with high levels of vulnerability. With global average temperatures already at 1°C above pre-industrial levels, this trend will significantly worsen as the world inevitably moves towards 1.5°C of warming and the impacts of climate change unfold for at least the next 30 years (IPCC, 2021). The SP responses to COVID-19 offer insights into how systems can be better adapted to manage future compounding risks from climate-related disasters. The purpose of this paper is to add to this emerging area of interest and provide lessons for using SP tools in risk management for future climate-related emergencies.

## Methodology and scope

**This paper aims to explore how the socio-economic impacts of widespread, intersecting shocks and disasters can be managed through SP in a context of intensifying climate change.** In order to do so, the paper briefly reviews and summarizes existing evidence of climate shocks and disasters in 2020 and their intersection with COVID-19 in 2020. It then reviews the experiences with the use of SP as a policy instrument to respond to the socio-economic impacts of COVID-19 in 2020, with a focus on summarizing literature reviews and existing analyses of successes and challenges. Since there are no similar global stocktakes or studies analyzing SP responses to climate-related disasters in 2020 or prior, the paper also reviews the experiences of two countries – India and the Philippines – that have experienced intersecting climate disasters and COVID-19 with varying SP responses. These brief case studies showcase details to the challenges that arose when compounding risks affected an already stressed SP intervention. The paper then draws inferences regarding the future use and scope of SP responses to deal with intersecting risks related to climate change.

The paper draws on qualitative and quantitative secondary information from different sources including working papers, academic publications, policy briefs, databases and data visualizations. The case studies included a small number of key informant interviews.

**The paper is accompanied by a data dashboard which presents the information from this report graphically and can be used as a tool to analyze the international experience and compare country specific disasters, COVID-19 cases and SP responses in more detail.** The dashboard compiles information from various sources, including information and statistics gathered from databases hosted by John Hopkins University, the University of Oxford, the International Labour Organization (ILO) and the World Bank. The data sources for this dashboard are available in Appendix A. The dashboard can be accessed at [Social Protection Responses to Compounding Risks: Lessons from Covid-19 and climate-related disasters](#).

**Because of COVID-19's rapidly changing nature, and the intention to translate findings from the pandemic to the future challenges arising from climate change, the paper is inferential,** based on a limited review of literature about events occurring in 2020 and the authors' own observations. It summarizes information across a range of countries and contexts. As such, it does not provide detailed commentary on the technical aspects of SP including, for example, financing or governance. The paper only analyzes information produced in the period 11 March 2020 (when the World Health Organization (WHO) declared the pandemic) to 15 December 2020. For that reason, we recommend additional research to update the findings from this work in 2021.





Antipolo City, Philippines - April 14, 2020:  
A local government organized mobile market  
goes to residential communities to sell food items  
during the lockdown due to Covid-19 virus outbreak.  
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# Climate change, intersecting disasters and COVID-19

## Climate change and COVID-19

**COVID-19 has been compared to climate change in terms of its global and local impacts and, indeed, there are important parallels between them (Markard & Rosenbloom, 2020).** Unlike a single direct shock or trend, climate risks arising from climate change are diffuse and indirect, with long-term multi-dimensional impacts (Schaffrin, 2014). Similarly, the pandemic has had complex, multi-sectoral impacts, affecting individual health and well-being as well as global and local economic activity and livelihoods, significantly impacting the most vulnerable people. As such, COVID-19 represents an example of the wide-ranging impacts that large shocks can have when complex risks materialize, with repercussions far and beyond the public health sector, such as profound disruptions to daily life, livelihoods and employment around the world (Costella *et al.*, 2021). However, the timescales are different – while COVID-19 has created economic disruptions and increased poverty and vulnerability on a very large scale, climate change and its impacts will materialize at an even larger scale over a much longer period (IPCC, 2021). Nevertheless, the pandemic has required a global response effort, and countries have taken unprecedented steps to finance and implement measures to respond to it. Indeed, the rapidity and concertedness of the COVID-19 responses at the global and national levels are encouraging and a step in the right direction for future efforts to tackle climate change.

**Perhaps more importantly, the COVID-19 pandemic provides insights into the nature of future climate-related challenges, which are likely to result in compounding risks that lead to intersecting disasters with complex impacts.** Anthropogenic forces have increased the likelihood of compounded extreme events in comparison to the 1950s (IPCCC, 2021). This includes the frequency of simultaneous heatwaves and droughts globally as well as increases in high fire risk weather and compound flooding in some regions (*ibid*). Compound floods are expected to continue to increase in frequency due to rises in the sea level and increased heavy rainfalls (*ibid*). Currently floods<sup>1</sup> represent 44 per cent of climate-related disasters with storm events at 28 per cent (UNDRR and CRED, 2020). Moreover, these events have largely impacted regions with highly vulnerable populations, including in Asia, sub-Saharan Africa and the Americas, tending to have the largest impacts on already socially marginalized or vulnerable groups, and intersecting along lines of race, ethnicity and gender (Phillips *et al.*, 2020). As climate change intensifies, its impacts will increasingly

<sup>1</sup> Heatwaves are also likely to represent large impacts on health and livelihoods caused by climate change. However, the difficulty in quantifying impacts results in their underrepresentation in the data.

intersect with, and compound, risks arising from other social and economic crises (such as pandemics, conflicts, migration, and other natural disasters) as well as multiple hazards arising from the climate system (droughts followed by floods, converging storms, etc.)

**Intersecting disasters have widespread, difficult to track effects, and responses to them will require novel solutions.** Intersecting disasters can have nuanced impacts, beyond those that would be expected, uniquely affecting different groups, communities, industries or sectors across multiple impact lines, including economic, social and physical. Disasters may occur on different timescales, with impacts unfolding at different rates. The COVID-19 pandemic, for example, which has had slowly unfolding but consistent impacts, may intersect with a typhoon – a sudden event with the possibility of severe and pronounced consequences. In addition, compounding disasters may impact different demographic groups in unexpected ways, intensifying the effects as vulnerability increases. For example, as the COVID-19 pandemic progresses, income volatility in the informal sector in cities increases and more and more people move back to rural areas, a cyclone decimating agricultural crops may reduce their capacity to substitute their income loss with subsistence crops. This might also create challenges for providing emergency assistance, identifying and targeting individuals, families or groups in need of support, and providing adequate relief. A key challenge for future disaster management will be ensuring that systems are flexible and robust enough to meet the challenges arising from compounding risks.

## Climate-related disasters in 2020

**Large climate-related disasters had substantial impacts in 2020 at the same time as the pandemic unfolded.** The year saw Cyclone Amphan<sup>2</sup> – the strongest cyclone on record in the Bay of Bengal with 15 billion US dollars in estimated damages; heavy rain in Sudan affecting almost 900,000 people and resulting in the worst flood in the country in over 30 years; and prolonged heatwaves across Europe and North America (AON, 2020; IFRC, 2021). The Pacific islands including Vanuatu, Fiji and the Solomon Islands weathered Cyclone Harold<sup>3</sup>, while the Philippines was impacted by Typhoon Goni – the world's second strongest tropical cyclone on record at landfall (Masters, 2020). African countries including Uganda, South Sudan and Somalia have faced triple threats with COVID-19 intersecting with floods and locust outbreaks<sup>4</sup>.

<sup>2</sup> <https://www.wri.org/blog/2020/05/south-asia-confronts-double-disaster-cyclone-and-COVID-19>

<sup>3</sup> <https://www.aljazeera.com/opinions/2020/5/17/a-moment-of-reckoning-when-coronavirus-meets-climate-change/>

<sup>4</sup> <https://apnews.com/article/4d7f07d32115ce62f02c7c090b49f78e>

**Figure 1:** Climate-related disasters between 11 March and 15 December 2020 by disaster type



Data drawn from the EM-DAT database, current as of 15 December 2020, available at <https://www.emdat.be/>

**A large number of climate-related disasters overlapped with COVID-19 in 2020.** In the first half of 2020, Walton and Van Aalst quantified the intersecting impact of climate-related extreme weather events and COVID-19, identifying 92 disasters that overlapped with COVID-19 with an estimated 51.6 million people impacted by intersecting disasters, including over 3,000 deaths (Walton and Van Aalst, 2020). Updating these figures in Table 1 with data from EM-DAT – the international disasters database – shows that there were at least 235 unique events in 2020 since 11 March, including a total of 16,704 deaths, 5,310 injuries and over 81 million people affected.

Hydrological disasters had a significant impact, with over 44 million people and 38 million people affected by floods and storms respectively. Table 2 shows that the largest impacts were in South Asian countries such as Bangladesh, India and the Philippines, with substantial events in China, Central America and the United States. These figures likely under-estimate true impacts as they do not include those indirectly impacted by disasters, for example, with disruptions to the ability to derive a livelihood or other secondary impacts.

**Walton and Van Aalst (2020) also estimated the impact of extreme and prolonged heat events** (Table 3). Calculating the impact of heatwaves using excess deaths, Walton and Van Aalst estimate that these events have affected over 430 million people and resulted in at least 9,334 deaths. Unlike other climate-related disasters, the impacts of heat events are difficult to quantify, as isolating heat as a cause of death is challenging due to the limited evidence at a global scale (Guo et al., 2018). However, some studies are now trending towards quantifying excess deaths that can be attributed to heatwave-related events (*ibid*).



**Table 1:** Number of people affected and killed by climate-related disasters

Disaster type	Total affected	Total deaths
Drought	725,620	Unknown
Flood	44,000,000	5,031
Storm	38,600,000	1,192
Wildfire	2,409,483	124
Landslide (from heavy rains)	296,424	886
<b>Total</b>	<b>86,031,527</b>	<b>7,233</b>

Data drawn from the EM-DAT database, current as of 15 December 2020, available at <https://www.emdat.be/>

**Table 2:** Number of people affected and killed by climate-related disasters, by country

Country	Total affected	Total deaths
India	36,700,000	2,611
China	12,100,000	206
Bangladesh	9,100,000	145
Philippines	7,416,550	152
Honduras	4,713,693	52
United States	2,284,467	129
Vietnam	1,982,620	292
Pakistan	1,559,155	523
Somalia	1,371,000	40
Nicaragua	930,000	20

Data drawn from the EM-DAT database, current as of 15 December 2020, available at <https://www.emdat.be/>

**Table 3:** Regional extreme heat events overlapping with the COVID-19

Region	Event months	Total affected	Total deaths
East Asia and Pacific	July–September	145,667,190	Unknown
Europe and Central Asia	July–September	75,539,826	9,334
sub-Saharan Africa	July–September	73,016,939	Unknown
Latin America and Caribbean	July–September	42,289,847	Unknown
Middle East and North Africa	July–August	35,455,319	Unknown
South Asia	July–August	33,603,380	Unknown
North America	July–September	23,005,486	Unknown
Other regions	Various	3,168,355	Unknown
<b>Total</b>		<b>431,746,342</b>	<b>9,334</b>

Table based on Walton and Van Aalst's estimates, calculated using temperature and excess death data. Note that only Europe and Central Asia have adequate data to estimate total deaths.

**This data demonstrates the importance of thinking about disasters in terms of compounding risks.** Large numbers of individuals in 2020 were impacted by overlapping shocks, climate-related disasters and COVID-19, constraining individual, community and institutional capacity to manage the compounding financial and physical shocks. While recovering from one disaster, the impact of another can worsen or entrench impacts, leading to more pronounced or severe outcomes.



# Social protection responses to intersecting disasters and COVID-19

**SP is increasingly becoming an important tool in managing the impacts of covariate shocks, but knowledge of the extent to which SP interventions are used to respond to climate-related disasters is still limited.** SP responses to the COVID-19 pandemic have been unprecedented, leading to multiple reviews and analysis in almost real-time during 2020. However, there is no database that consolidates SP responses to covariate shocks on a regular basis. Hence, while it is possible to analyze the SP responses to COVID-19 at an aggregate level, it is not possible to do so for other disasters, including climate-related ones. This paper, therefore, focuses on summarizing lessons from SP responses to COVID-19 and exploring the question of intersecting disasters in two “mini” case studies from the Philippines and India.

## Social protection and COVID-19: A rapid review of responses and challenges

### *Nature, scope and differences across regions*

**The COVID-19 pandemic caused widespread damage – both physical and economic – in 2020 and continues to do so.** Health systems have been pushed to capacity, while economic and social policies, such as national lockdowns, have resulted in business closure and unemployment, threatening the ability of individuals to make a living. A key response to these challenges has been the rapid expansion of existing SP systems or the creation of parallel programmes to complement existing ones.

**After the WHO declared COVID-19 a pandemic on 11 March 2020, most countries announced SP responses.** As of 2020, 209 countries – or 92.9 per cent of the world – had instituted some form of SP, comprising 1,596 measures (ILO, 2020a).

**Over 50 per cent of the SP measures in 2020 were new programmes or benefits, mainly comprising special grants or income protection (*ibid*).** India, for example, announced 14 new programmes including the extension of cash transfers to MGNREGA beneficiaries (the Mahatma Gandhi National Rural Employment Guarantee Act – a social assistance programme in the country); compensation to impoverished workers who had lost work; and the creation of insurance schemes for doctors and health care specialists (*ibid*). Similarly, the Philippines introduced 18 new programmes, including lump sum payments to



affected workers and providing financial assistance to families with urgent medical needs (*ibid*).

**Most programmes were non-contributory and were announced during the first wave of the pandemic.**<sup>5</sup> Over 75 per cent of measures were non-contributory and were instituted during March and April 2020 (*ibid*). Globally, SP programmes tended to be cash or in-kind transfers, with few countries substantially increasing access or affordability of social services, such as education, housing and healthcare (*ibid*).

**The World Bank estimated that cash-based social assistance programmes alone covered an additional 1.3 billion people in 2020, or 17 per cent of the world's population** (Gentilini *et al.*, 2020). The average rate of coverage increase from pre-COVID times was roughly 217 per cent (*ibid*). However, because estimates of coverage are absolute rather than relative to rates of vulnerability, coverage figures can be misleading (SPACE, 2020d). Alone, they do not necessarily capture the efficacy of programmes, eliding the failure of systems to account for individuals or groups which slip through poverty or vulnerability registers. This is particularly concerning during the COVID-19 pandemic, which continues to have widespread impacts, adversely affecting groups not traditionally considered vulnerable.

**Most measures remained short-term, with few programmes designed to continue beyond the pandemic.** For example, of the social assistance programmes in 2020, 68 per cent were new and 29 per cent were one-off interventions, with the majority of interventions lasting for an average of three months – though, in some countries, they were extended (Gentilini *et al.*, 2020). Moreover, roughly 31 per cent of programmes ended within 2020 (*ibid*). This raises questions for the role of SP programmes to meet longer lasting income gaps as the pandemic continues to affect vulnerable households as well as longer term questions on the role of SP systems for responding to similar, climate-related disasters. Moreover, looking more specifically at income and job protection in COVID-19 relief and economic recovery, the World Bank has warned that without job protection, secondary demand effects are likely to be more pronounced with the potential to entrench poverty (Carranza *et al.*, 2020).

**There is a strong relationship between pre-existing social protection systems and the speed of expansion of SP programmes** (ILO, 2020b). Countries that already had benefit delivery systems, for example, as part of disaster preparedness programmes, were able to scale programme responses more rapidly. Vanuatu, for example, having invested heavily in institutional and legislative coordination after Cyclone Pam in 2015, already had in place the organizational integration required to address the varied impacts of Cyclone Harold in 2020 while responding to COVID-19 (UNDRR Asia Pacific, 2020a). The Philippines had developed the necessary institutional infrastructure, such as social registries and payment delivery methods, in response to previous climate-related disasters (UNDRR Asia Pacific, 2020c). Similarly, in Africa, countries with

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5 There is a gap between programme announcement and programme delivery. While accurately capturing delivery rates is difficult, the World Bank estimate that, in most cases, planned coverage is meeting actual coverage and few programmes have been abandoned after announcement (Gentilini *et al.* 2020).

pre-existing systems designed for the HIV/AIDS pandemic, including Ethiopia, Kenya and South Africa, were able to horizontally scale coverage more quickly (FAO, 2020). Conversely, countries that had pre-existing systems based solely on income as an indicator of vulnerability struggled to adequately expand coverage to other forms of vulnerability that the pandemic exposed (UNDRR Asia Pacific, 2020c).

**Differences in SP between regions and income groups were observed.**

High-income countries tended to have a more even mix of social assistance, social insurance and labour market policies, while lower- and lower-middle-income countries relied more on social assistance programmes, focused on enhancing the immediate living conditions of the most vulnerable (Gentilini *et al.*, 2020). Higher income countries also tended to institute policies targeted at stabilizing macro-economic conditions, including more labour market interventions, focusing on job protection with wage subsidies and support packages for small- and medium-sized enterprises (Abdoul-Azize and El Gamil, 2020).

Countries in sub-Saharan Africa focused more on utility support for households and cash-based transfers with disaster risk reduction (DRR) agencies and non-state non-governmental organizations (NGOs) playing a greater role in food aid (UNDRR, 2020). Conversely, countries in Latin America and Asia, such as Chile and Peru, focused on the early provision of pre-existing entitlements such as retirement pensions, rather than creating novel SP systems (Gentilini *et al.*, 2020).

## Challenges faced by social protection responses to COVID-19

### *Meeting coverage and demand*

**While coverage increased substantially, the number of those classed as vulnerable also increased.** Because coverage was already lower than needs before the pandemic, this means that coverage rates may only reflect the increases in vulnerable groups rather than the efficacy of SP responses (SPACE, 2020d). The pandemic has shown that poverty patterns can change quickly, impacting not only those in poverty but also those in danger of slipping into poverty. It is estimated that in South Asia alone, for example, COVID-19 might have pushed 2.3 per cent of the population – or 42 million people – into extreme poverty (IPC-IG, 2020). This means that systems reliant on existent indicators of poverty can fail to reach vulnerable individuals (UNDRR Asia Pacific, 2020c). SP programmes require efficient solutions that are able to accurately identify these groups to effectively scale horizontally while meeting growing requirements.

### *Providing for informal sector workers, non-state citizens and vulnerable groups*

**SP programmes faced challenges covering informal workers and non-state citizens, including migrants, refugees and others not eligible for state-based programmes.** People in the informal sector are harder to target because they have no institutionalized protection and have low levels of financial inclusion (ILO, 2020c). Moreover, informal workers are more exposed to the health and

economic ramifications of the crisis because they tend to be less educated, low-paid, living in precarious circumstances, and migrate for work (IPC-IG, 2020). These are not trivial concerns. In the Asia Pacific, an estimated seven in ten workers are in informal employment (ILO and ESCAP, 2020). This is especially true of countries with high disaster risk where informal work as a proportion of total work has increased substantially in recent years, including in Bangladesh, India, the Philippines and Myanmar where over 75 per cent of the workforce is informal (UNDRR Asia Pacific, 2020c).

**The speed with which SP programmes were put in place also makes exclusion along the lines of gender, disability and other indicators of marginality more likely** (Lind *et al.*, 2020). Moreover, targeting mechanisms based on pre-existing registers shown to be ill-suited to adequately reaching households previously excluded from SP systems (UNICEF, 2020). For these reasons, care should be taken in targeting interventions, especially in relation to identifying vulnerability.

### *Achieving transformative and lasting reductions in vulnerability*

**Few SP policies had goals that aimed to put in place lasting reductions in vulnerability.** Prior to the pandemic, authors have highlighted the role of SP in supporting structural reductions of vulnerability, especially in light of the challenges arising from climate change (Tenzing, 2020). However, the initial goals of SP responses to COVID-19 were around immediate income stabilization and avoiding destitution, and thus policies focused on one-off or temporary cash transfers were favoured (ILO, 2020a).

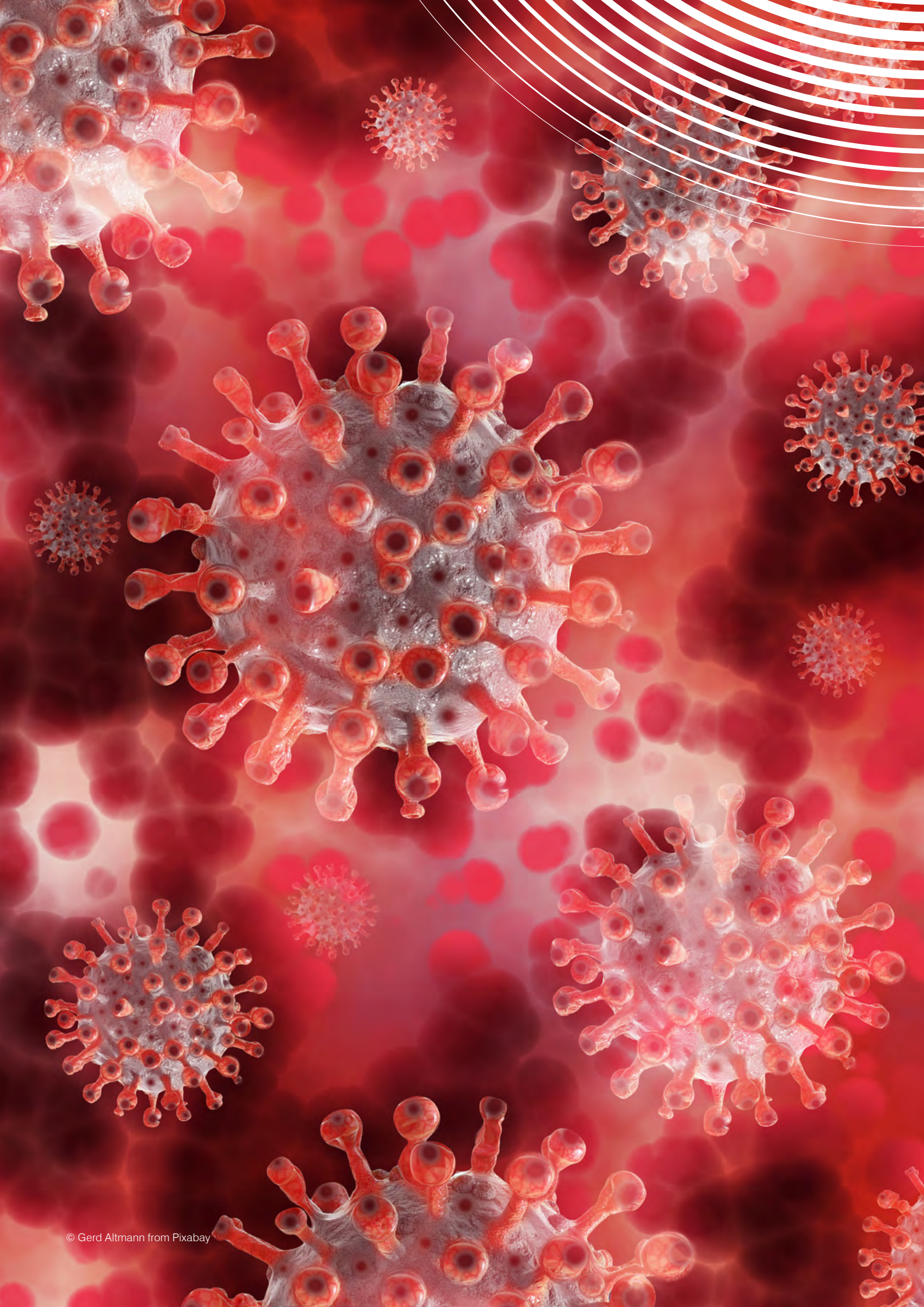
### *Technical innovations and challenges<sup>6</sup>*

**The COVID-19 pandemic highlighted a range of challenges specific to programme implementation.** Paramount among these has been the need for up to date registers of vulnerable households (Bowen *et al.*, 2020). Some novel solutions have already been implemented. Across the Asia Pacific, digital identification systems, used to minimize the extent of face to face interaction, have proved to be quick and efficient. In India, for example, the MGNREGA added a biometric-enabled national identity system to verify beneficiaries and link to their bank accounts, reducing fund leakages and ensuring faster payments (UNDRR Asia Pacific, 2020c). More generally, there have been calls to increase formality in SP programmes and labour market schemes as a way to improve future targeting and meet scaling challenges (ILO, 2020c; World Bank and G2Px, 2020). Other technical innovations have included the use of mobile cash transfers and online platforms for rapid beneficiary registration, including informal workers.

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6 The technical innovations listed here are not exhaustive but aim to present key take-aways and touch on overarching issues. At the country level, various unique and innovative methods of registration and payment systems have been established.







## Case Studies: India and the Philippines' experience with intersecting disasters in 2020

Using the 'National Level' view in the data dashboard (see Section 2), this section provides a deeper analysis into the experience of two countries – India and the Philippines. Both countries have experienced multiple severe disasters while managing the impacts of substantial and persistent COVID-19 infection rates. Moreover, both countries have a history of using SP as a disaster management tool and have invested resources into improving those systems in response to COVID-19.

### *Climate-related disasters in 2020*

In 2020, India had at least ten unique<sup>7</sup> climate change-related disasters which intersected with the COVID-19 pandemic. Most of these events were cyclones or monsoonal flooding, inundating large areas and causing widespread structural damage, injury and loss of life. In total, these events have directly caused 2,869 deaths or injuries, estimated to have affected over 32 million people, totalling over 24 million US dollars in damages (Table 4).

The Philippines had a similar experience, hit by Typhoon Vongfong in May 2020 and then seeing multiple typhoons – including Typhoon Goni, an extremely powerful super cyclone – from late October to mid-November (Table 5)<sup>8</sup>. These events are estimated to have caused over 842 injuries or deaths, affected over 7 million people and totalled over 450,000 US dollars in damages.

**Table 4:** Disaster impacts in 2020, India

Date	Disaster	Total dead or injured	Total Affected	Total Damages ('000 US\$)
11/01/2020	Storm	11	Unknown	Unknown
10/05/2020	Flood	29	Unknown	Unknown
20/05/2020	Cyclone Amphan	103	14,000,000	13,500,000
27/05/2020	Landslide	21	155,850	Unknown
1/06/2020	Flood	2,164	17,000,239	6,000,000
1/06/2020	Flood	196	1,405,010	Unknown
3/06/2020	Cyclone Nisarga	6	7,500	665,000
24/06/2020	Flood	127	Unknown	Unknown
7/08/2020	Landslide	70	Unknown	Unknown
1/10/2020	Flood	142	150,000	4,000,000
<b>Total</b>		<b>2,869</b>	<b>32,718,599</b>	<b>24,165,000</b>

Data draw from the EM-DAT database, current as of the 15 December 2020, available at <https://www.emdat.be/>

7 A unique disaster here means a distinct event. EM-DAT frequently double counts disaster events when they have distinct impacts. To count the number of unique disasters, these multiple impacts are considered together.

8 While there was another Tropical Storm in the Philippines in mid-December (Krovanh/Vicky), our data dashboard does not include it given that it was outside the period when this research was conducted.

**Table 5:** Disaster impacts in 2020, the Philippines

Start Date	Disaster	Total dead or injured	Total Affected	Total Damages ('000 US\$)
15/05/2020	Typhoon Vongfong	169	250,169	31,000
28/10/2020	Typhoon Quinta	68	848,121	53,761
31/10/2020	Typhoon Goni	430	2,030,529	267,713
11/11/2020	Typhoon Vamco	175	4,288,421	98,233
<b>Total</b>		<b>842</b>	<b>7,417,240</b>	<b>450,707</b>

Data draw from the EM-DAT database, current as of the 15 December 2020, available at <https://www.emdat.be/>

### **Intersection with COVID-19**

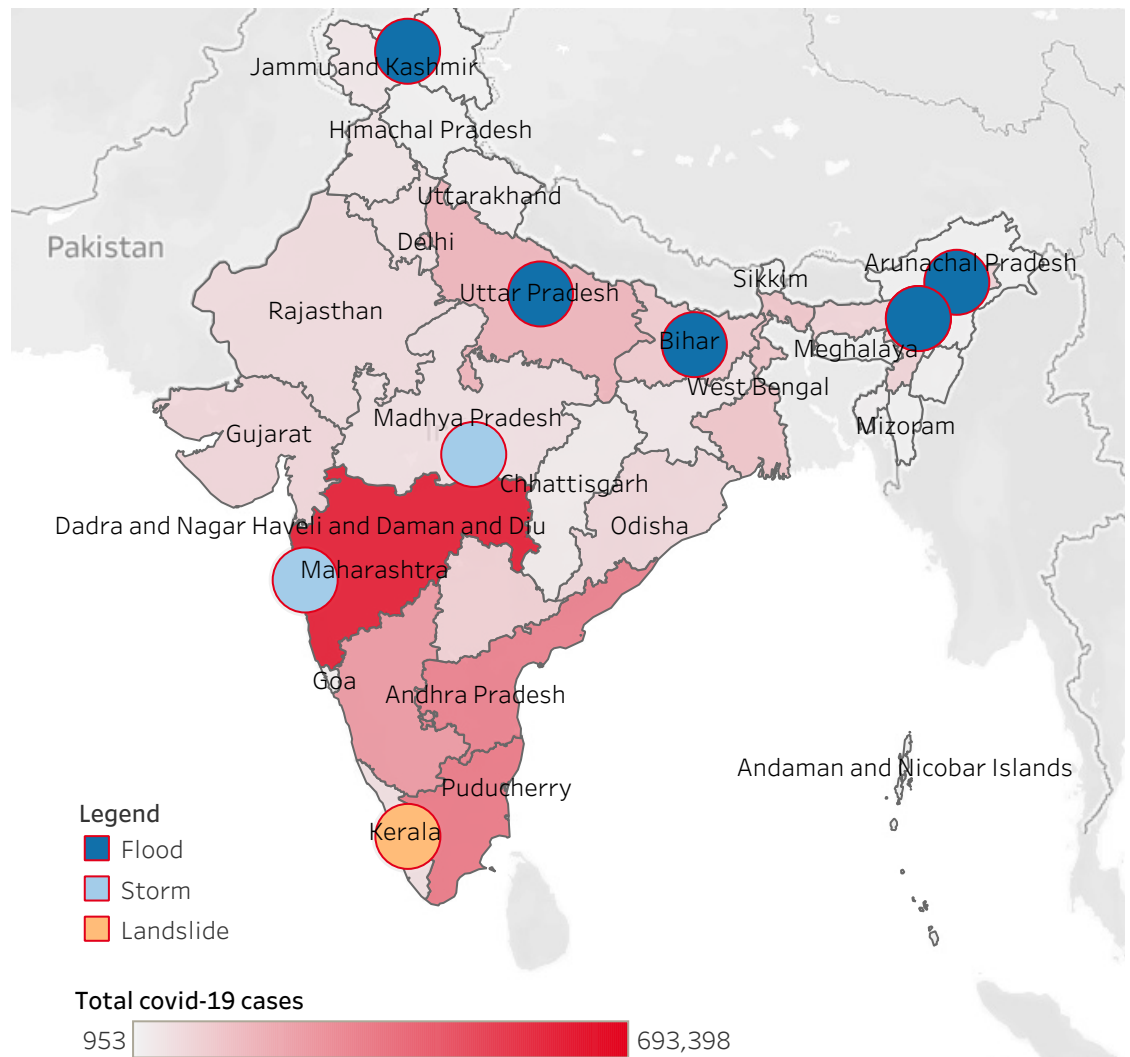
**In 2020, India saw some of the highest rates of COVID-19 internationally**, with cases predominantly clustered in high density urban areas (Figure 2). Due to India's large population and high levels of informal workers, the government had mixed success in containing the economic and health impacts of the virus. In June 2020, the World Bank estimated that India's Gross Domestic Product (GDP) was likely to decline by 3.2 per cent that year (World Bank, 2020a), compared to estimates in January of over 5 per cent growth; and that poverty rates may climb close to 20 per cent, compared to pre-pandemic levels of under 18 per cent (IPC-IG, 2020).

**COVID-19 complicated disaster management for cyclone, typhoon and flooding events.** On 20 May, Cyclone Amphan caused high winds and heavy rains throughout West Bengal and Odisha in the north-eastern region of India. While India has historically had comprehensive disaster management systems, including national and regional organizational bodies and funding mechanisms, the pandemic restricted potential resources, both limiting the amount of international aid available and constraining the delivery in-kind. In addition, as COVID-19 overburdened the country's healthcare system, resources had to be spread more thinly, potentially leading to usually preventable deaths.

**In the Philippines, COVID-19 rates initially increased slowly.** While COVID-19 precautions were necessary during the management of Typhoon Vongfong, daily infections were well below 50 and the pandemic did not necessarily present the types of constraints experienced in India. From August 2020, however, COVID-19 rates began to increase, peaking at over 5,000 cases per day in mid-August and remaining at around 2,000 cases per day during Typhoons Quinta, Goni and Vamco (Figure 4). These typhoons required the mobilization of over 350 million US dollars in financial assistance from the central government<sup>9</sup> and additional aid from international partners such as UNICEF.<sup>10</sup>

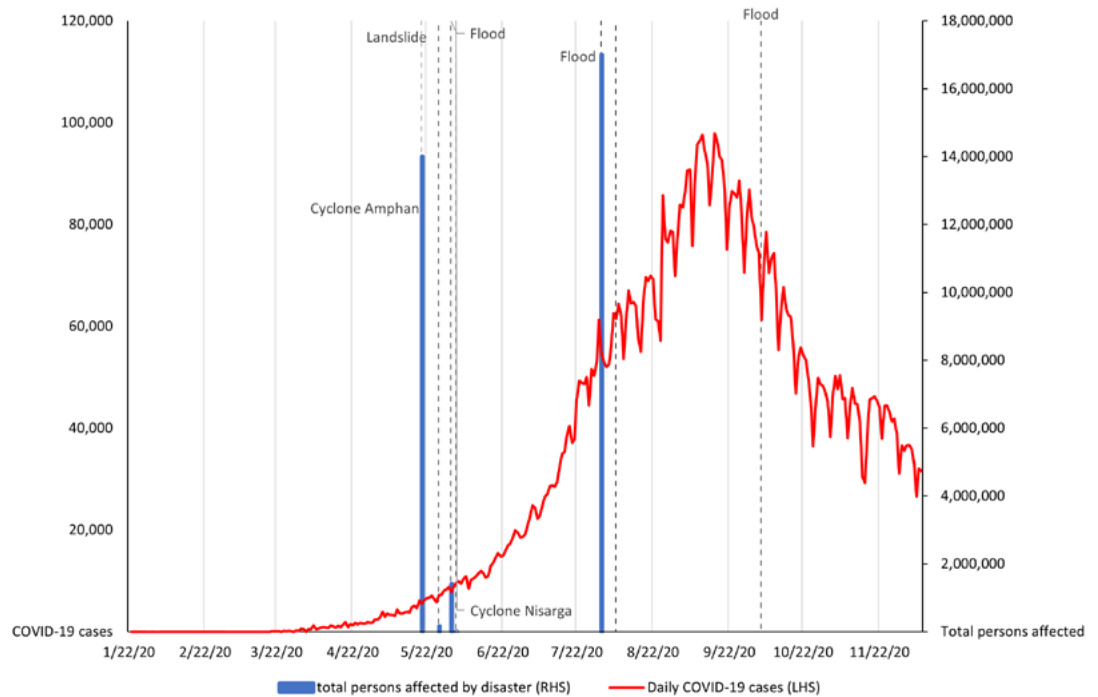


Figure 2: COVID-19 cases and disasters, India



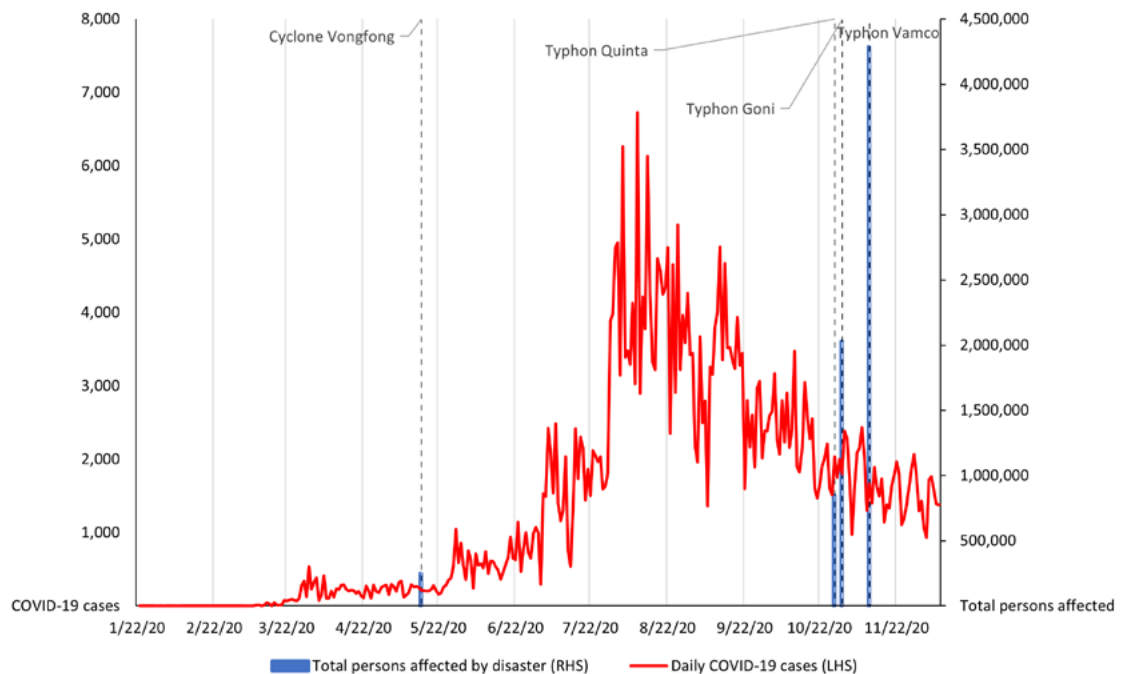
Based on data from the Ministry of Health and Family Welfare, India, available at <https://www.mohfw.gov.in/>. Note that this data is not included in the data dashboard.

Figure 3: Daily COVID-19 rates and climate-related disaster impacts, India



Disaster data draw from the EM-DAT database available at <https://www.emdat.be/>, and COVID-19 data drawn from the John Hopkins Coronavirus Resource Center available at <https://coronavirus.jhu.edu/map.html> current as of the 15 December 2020

Figure 4: Daily COVID-19 rates and climate-related disaster impacts, the Philippines



Disaster data draw from the EM-DAT database available at <https://www.emdat.be/>, and COVID-19 data drawn from the John Hopkins Research centre available at <https://coronavirus.jhu.edu/map.html> current as of the 15th December 2020 Social protection responses





MUMBAI/INDIA - MAY 11, 2020: Migrant workers walk on the highway on their journey back home during a nationwide lockdown to fight the spread of the COVID-19 coronavirus.  
© Manoj Paatel/Shutterstock



## *Social protection responses*

**India and the Philippines implemented various SP measures to respond to COVID-19.** The Philippines acted relatively quickly to establish new systems or adapt pre-existing systems, with an estimated 62 per cent of the population covered by cash transfers – an increase of over 200 per cent on pre-COVID-19 levels and well above the global average of 17 per cent (Gentilini *et al.*, 2020). Comparatively, India was just below the global average on planned or implemented cash transfer programmes, with 16 per cent estimated coverage (*ibid*).

**India's SP responses were predominantly in the form of social assistance and social insurance, whereas the Philippines implemented a more diverse suite of SP programmes. Most measures in India consisted of cash transfers or in-kind contributions** (Figure 5), while the Philippines also put in place several labour market policies, universal paid leave and subsidies for household utility costs (Figure 7). These systems were largely built on existing SP systems, for example, over 300 million female accountholders of the Pradhan Mantri Jan-Dhan Yojana programme (a financial inclusion programme) received account-based cash transfers to a total value of 500 Indian rupees<sup>11</sup> as an immediate response to the COVID-19 pandemic (Gentilini *et al.*, 2020).

**Both countries invested largely in new programmes.** In India, close to 40 per cent of new measures were new programmes, while changes to pre-existing programmes largely involved relaxing eligibility constraints or increasing benefit levels (Figure 6). New programmes in India included the creation of online portals to enable stranded migrant workers to access funds as well as the introduction of cash-based transfers for MGNREGA accountholders along with regional programmes such as the subsidization of utility bills in Jammu and Kashmir and providing financial relief to families of COVID-19 victims in Puducherry (ILO, 2020a).

**In the Philippines, close to 60 per cent of measures involved the creation of new programmes, primarily providing additional benefits to vulnerable populations, including workers.** Other new programmes included lump sum payments of over 5,000 Philippine pesos in aid for affected workers, and the launch of upskilling and temporary employment through public works programmes for affected informal sector workers (*ibid*). Programme adjustments were largely around extending coverage or suspending eligibility requirements such as, for example, the removal of the need for regular health check-ups to access 4P (Pantawid Pamilyang Pilipino Program – the Philippines' flagship SP programme)<sup>12</sup> (Figure 8).

11 <https://www.news18.com/news/business/under-pradhan-mantri-jan-dhan-yojana-women-account-holders-to-receive-rs-500-per-month-from-today-COVID-19-2562507.html>

12 <https://pia.gov.ph/news/articles/1036549>



**Both countries made substantial changes to payment delivery systems or beneficiary registries.** In the Philippines, for example, a new national identification system for benefit payments was designed to be more responsive to changes in vulnerability, as previous social assistance responses were missing certain populations (Gentilini *et al.*, 2020). In India, QR code payments, mobile-based benefit delivery systems, point of sale systems and biometric authentication mechanisms were integrated by the National Payments Corporation of India to enable remote, or socially distanced, benefit delivery methods (*ibid*).

Figure 5: Social protection responses by type, India

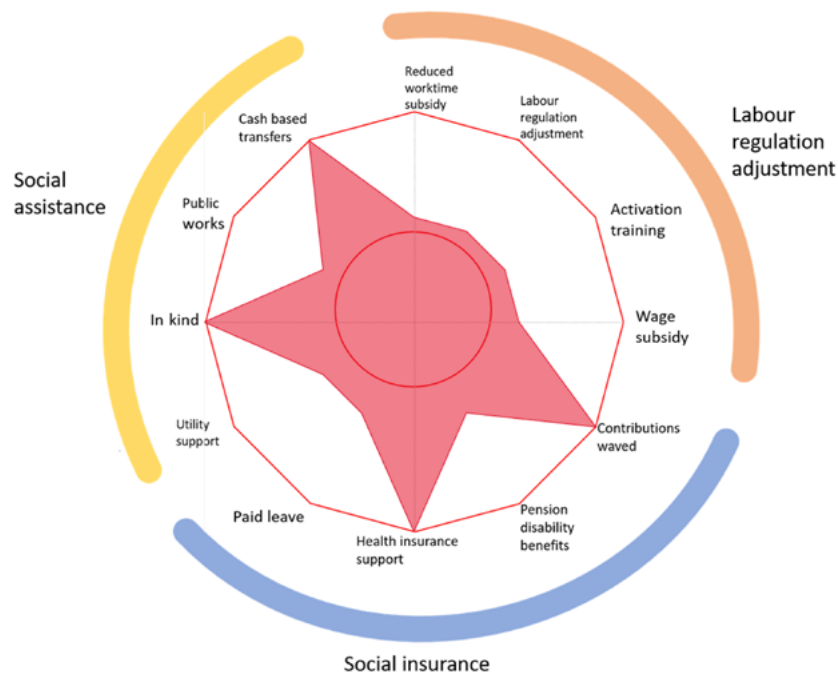


Figure 6: Social protection type and function as percentage of total, India

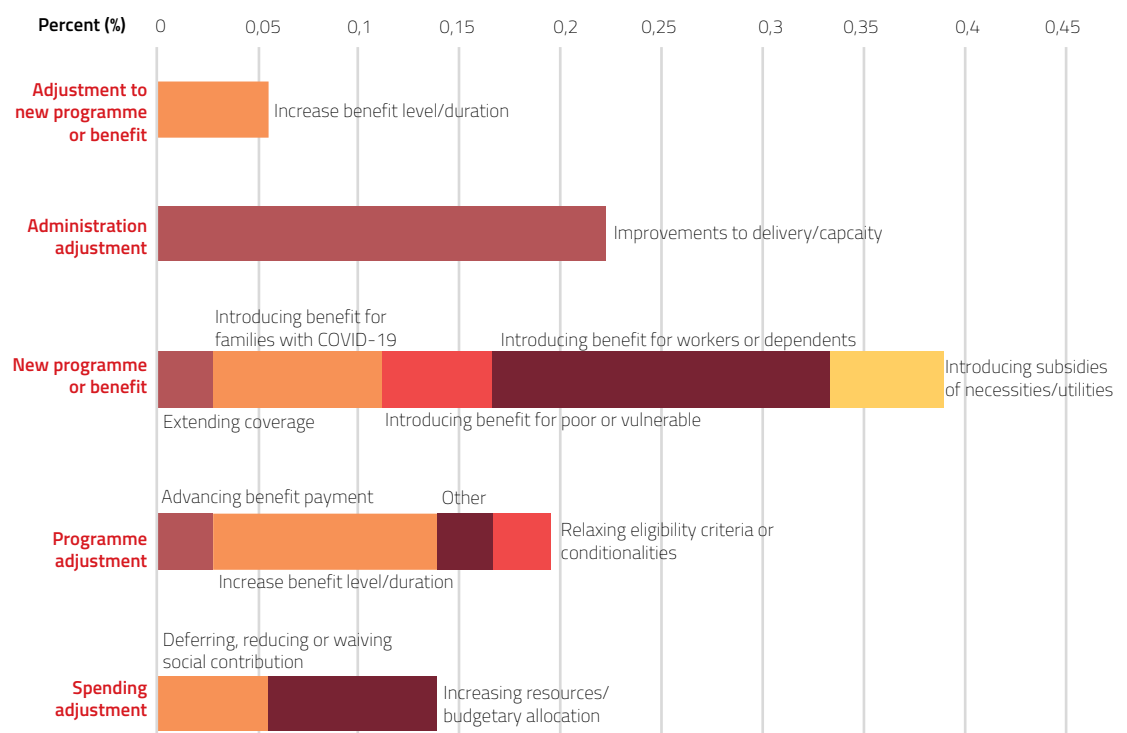
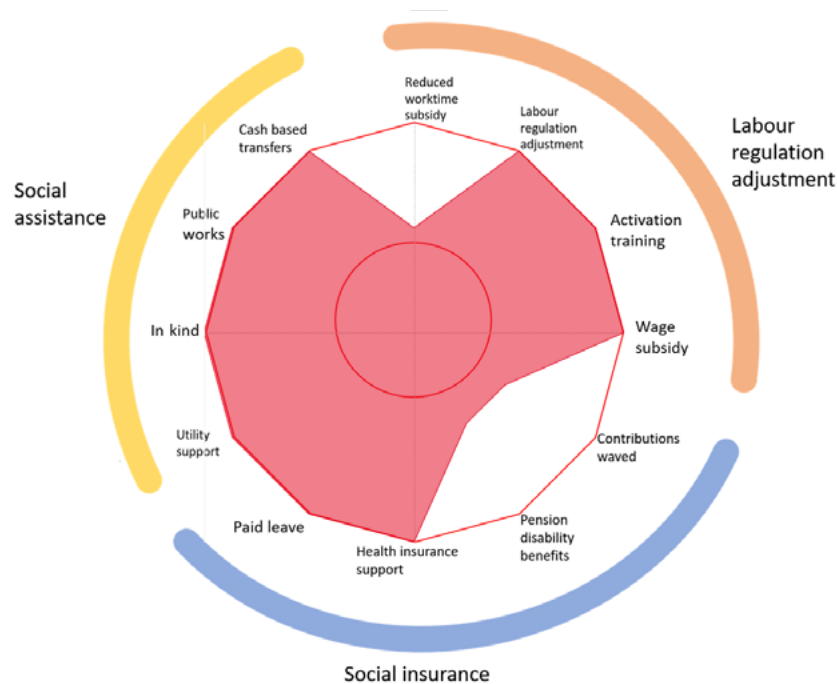
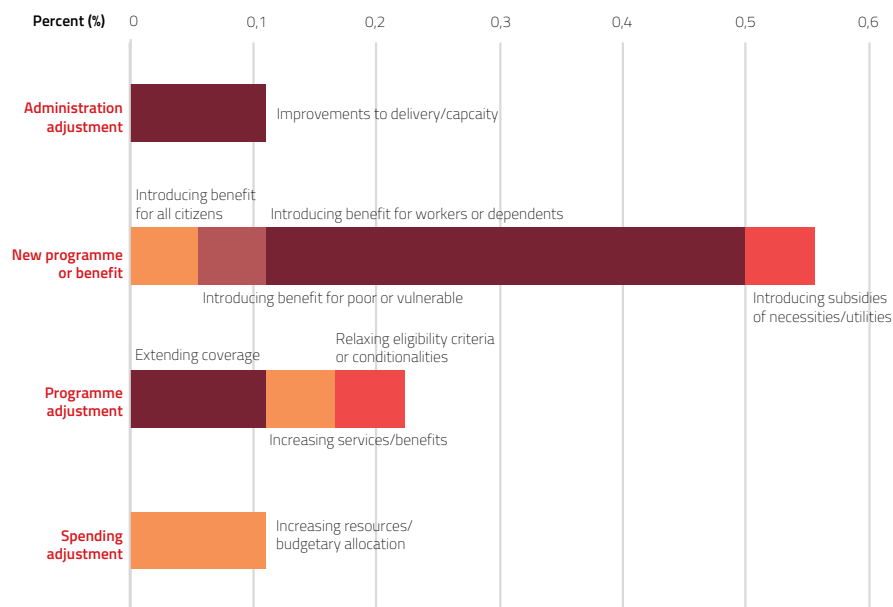


Figure 7: Social protection responses by type, the Philippines



Figures 5 and 7 based on data from the World Bank, available at <https://openknowledge.worldbank.org/handle/10986/33635>

Figure 8: Social protection type and function as percentage of total, the Philippines



Figures 8 and 9 based on data from the ILO, available at <https://www.social-protection.org/gimi/ShowWiki.action?id=3417>

**In 2020, the responses to climate-related disasters in the Philippines were more localized and smaller in nature.** The SP response to disasters in the country in 2020 was dominated by COVID-19, which prompted a national state of emergency as well as the passage of new legislation allowing for a substantial social assistance response at the national and local levels (Farhat & Borja, 2021). The responses to other natural disasters in 2020 (earthquake and typhoons) were similarly localized as were the subsequent declarations of emergency (*ibid*). For these, the SP response focused on emergency

assistance through in-kind support and the infrastructure of the 4Ps programme was used to support existing beneficiaries in affected areas. More than 2.5 million 4Ps beneficiaries in areas affected by Typhoon Goni were prioritized for the provision of unconditional cash grants through their cash cards<sup>13</sup>. Aside from the provision of relief aid, the Department of Social Welfare and Development (DSWD) in the country also continued to provide SP assistance through psychosocial support, including the provision of women- and child-friendly spaces in existing evacuation centres (Farhat & Borja, 2021). Nevertheless, the new flagship shock-response social assistance scheme – the Emergency Cash Transfer, which, under the existing rules, would have been available to respond to the climate shocks but not to COVID-19 – was not yet functional and could not be used (*ibid*).

**There is limited documentation on what challenges arose from the combination of climate shocks intersecting with COVID-19 and how they were managed in the Philippines, although some media outlets reported some key concerns.** After Typhoon Goni in the Philippines, humanitarian agencies reported concerns about the complicated nature of deploying humanitarian and disaster response efforts on the ground due to the risks of COVID-19 and associated restrictions (OCHA, 2020; UN News, 2020). In particular, the risk of virus transmission at evacuation centres as well the need to avoid further transmission from humanitarian workers were reported. The Philippines' [Humanitarian Response Plan](#) briefly mentions the distribution of social cash transfers for household members who lost their livelihoods, without going into detail on whether and how the long-term socio-economic impacts of both the typhoons and COVID-19 have been managed and whether SP has had a role in it. In one positive example of coordination, however, it appears that the Department of Labour and Employment (DOLE) in the Philippines extended its assistance to the residents of Bicol Region affected by Typhoon Rolly (Vamco) in November 2020 through the COVID-19 Adjustment Measures Program (CAMP) (Farhat & Borja, 2021).

**SP responses to Cyclone Amphan in India consisted of a 132 million US dollars relief package to the states of Odisha and West Bengal** (Ober, 2020). Since these states are frequently inundated by floods and cyclones, they have developed capable response strategies and mechanisms that include evacuation shelters, emergency in-kind food and water provisions, and hygiene products (ESCAP, 2020). The use of these mechanisms was hindered due to COVID-19 social distancing regulations which made evacuations into cyclone shelters challenging due to the limited capacity (*ibid*). The combination of these twin crises exacerbated COVID-19 infection rates which is why additional support was required. The relief package was intended to be cash provisions for those affected by the cyclone; however, an official financial breakdown was not provided (Ober, 2020).

**As with the Philippines, there are limited insights on the use of SP instruments to respond to both the combined effects of climate disasters and COVID-19 in India.** In analyzing India's SP response to COVID-19, Bhattacharya and Sinha Roy (2021) found that the current one-size-fits-all model of interventions will not be sustainable to respond to multiple crises such as COVID-19 and climate disasters in India. They advocate for a more decentralized and context-sensitive SP approach that considers the different socio-economic needs of India's states (*ibid*).

## *Lessons learned from India and the Philippines*

**The SP measures implemented in India and the Philippines to respond to COVID-19 could be extended or adapted to provide valuable assistance during future climate-related emergencies.** Both countries have made important changes to eligibility criteria, invested in new distribution or identification systems, or adapted current programmes to be more flexible. Many of these changes could prove invaluable during future emergencies, providing the foundation for comprehensive SP frameworks to manage compounding risks.

**Investments in new programmes targeted at migrant and informal workers, who are typically harder to target, are meaningful improvements.** India's investment in new online portals for stranded workers to access funds as well as Uttar Pradesh's one-off payments targeted at street vendors and rickshaw drivers, provide examples of how similar approaches could target informal or migrant workers affected by climate emergencies. The Philippines also implemented novel programmes, including the provision of ten days' temporary employment for informal sector workers who had lost their jobs and the provision of direct aid to Filipino workers stranded overseas affected by travel bans, or left unemployed after repatriation (Gentilini *et al.*, 2020).

**India had greater difficulty meeting the needs of its informal workers, in part due to the comparatively large size of the sector in the country, which is roughly 90 per cent of the total workforce** (IPC-IG, 2020). It is important to note that the largest group in the informal sector in India are agricultural workers, who were less impacted by COVID-19 in 2020 (IPC-IG, 2020). However, the extent to which this is likely to be the case during future compounding disasters is debatable. The experience demonstrates the importance of having systems that can target flexibly those working in informal sectors.

**India also saw large levels of urban to rural migration in response to COVID-19, with unemployed individuals returning to rural areas which are typically highly dependent on climate-sensitive livelihoods.** This migration burdened social assistance programmes such as MGNREGA leading to lower levels of coverage than demand by returning workers. Based on information from key informant interviews, the return of migrant workers and family members led to declines in the per capita cash made available through MGNREGA, as the provision of an additional 100 days of work was spread over larger households. While we did not uncover specific examples, it is likely that climate-related shocks or stressors in rural areas could have worsened the situation for these migrants at a time when the SP programme was already overstretched (FAO, 2021).

**Both countries have also made ad-hoc changes to pre-existing systems, using their registers to identify likely beneficiaries.** In India, for example, the Pradhan Mantri Ujjwala Yojana (PMUY), and Public Distribution System (PDS) were leveraged to identify households in need and extend cash or in-kind transfers to them. In the Philippines, newly vulnerable households were enrolled under the flagship 4Ps programme, with programme conditionalities waived to ensure a more rapid distribution of assistance.



**However, methods of identification using pre-existing registers are likely to lead to some level of exclusion errors, resulting in lower rates of meaningful coverage.**

According to the interviews, existing poverty registers in both countries fail to account for the vulnerabilities of a variety of households. Using unidimensional indicators of poverty, old registers are inflexible and may fail to account for rapid changes to risk, like those induced by the pandemic. The investments of both countries in broader registers with creative and effective identification strategies is promising. Future identification systems should aim for a universality, including more extensive measures of vulnerability.

**Coordinated efforts across sectors within governments were important in ensuring successes in response.** In India, the Disaster Management Act 2005 – an overarching cross-sectoral disaster framework – provided a strong legal grounding from which to build a robust pandemic response (UNDRR Asia Pacific 2020a). DSWD in the Philippines is a core agency in the Government’s emergency response structure, and it can provide both direct social assistance benefits as well as other social services – psycho-social support, shelter, etc. – that are essential in a disaster response situation.









# The role of social protection for compound climate risks:

## Key insights and way forward

The increasing recognition of SP as an instrument for responding to shocks, in addition the experience of COVID-19 responses in 2020, presents an opportunity to think synergistically about SP's role in managing compounding disaster risks (Markard and Rosenbloom, 2020). This section summarizes the key insights from our study on the role of SP for intersecting disasters in 2020, climate-related shocks and COVID-19 in particular. A few selected areas are proposed here for the further development of a research and operational agenda.

### Key insights

**There is very limited attention paid to the impacts and management of intersecting disasters, from both the disaster response and SP sectors.** Our research did not uncover significant literature on the use of SP for intersecting disasters in 2020, and key informants were not aware of it. There might be multiple reasons for this: first, SP responses to covariate shocks, other than COVID-19, are not tracked regularly, making access to aggregate information difficult; second, the pandemic was an extremely unusual event, and it is likely that the focus on more “regular” disasters slipped during 2020. Nevertheless, this points to a significant gap in understanding how to manage the impacts of climate change, which are likely to involve complex, multi-dimensional impacts from compound risk.

**Despite the lack of evidence, intersecting disasters present new institutional, operational and logistical challenges and it is likely their compounded impacts have created significant problems in the Philippines and India as well as around the world.** For instance, as the pandemic has intersected with other disasters, countries have had to adopt multi-sectoral responses; managing the economic and social consequences of the virus while combating the severe and pronounced impacts of a sudden disaster response. This has entailed physical challenges – such as managing the logistics of delivering food and water to disaster-affected communities, while following COVID-19 risk reduction practices. Equally, it has involved organizational challenges – such as coordinating disaster and health responses across national agencies and between other organizations, like NGOs.

**In various ways, the pandemic revealed inadequacies in the dominant single-hazard disaster management approaches, which is also applied in shock-responsive SP. First, SP systems and other disaster response systems needed to manage impacts unfolding on different timescales and with different magnitudes.** Where COVID-19 intersected with disaster events such as floods, cyclones or typhoons – as in India and the Philippines – national responses were put in place to manage events which had different severities and timescales. In these cases, a single, uniform response was likely to be inadequate, overproviding for some while underproviding for others. Future systems need to have the flexibility to respond to different types of disasters, with each governance level (local, state, national) adequately equipped to manage and reduce the impacts.

**Second, the challenges in meeting the needs of rapidly increasing numbers of vulnerable people across different groups have important implications for the increasingly important role of SP in responding to intersecting shocks,** especially climate-related ones. For example, SP policies implemented during the pandemic first struggled to meet the needs of groups such as middle-income households, which are often excluded from national vulnerability or poverty lists. While coverage rapidly expanded in many cases, questions remained around whether it had stretched to cover the right people and whether adequate support, commensurate with the needs of different individuals, was provided. Within these challenges there are lessons for how to adapt disaster responses to manage future compounding climate-related risks.

**In addition, the experience of COVID-19 in 2020 also revealed the importance of SP systems that are in place and institutionalized before shocks materialize.** Countries with fragmented approaches to risk governance, or with little interaction between key ministries and disaster management bodies, were forced to respond in an ad hoc way, resulting in slower responses and raising more challenges in implementation (ILO, 2020b). In addition, solid information systems (e.g., social registries, identification cards, etc.) were a key pillar of timelier SP responses. Even during the first months of the pandemic, some countries began to establish new digital citizen registries, integrated with socio-economic, taxation or other public databases (IMF, 2020) in order to speed up the response. These efforts may provide solutions to challenges of coverage, enabling more rapid responses commensurate with changes to vulnerability.

**Finally, the pandemic also highlighted the importance of predictive – including forecast-based – methods of SP delivery.** Disasters are becoming predictable with accurate and predictive models are becoming integral to the use of SP as a disaster risk reduction strategy. Along these lines, there have been calls to link social assistance payments to both meteorological forecasting and vulnerability mapping (SPACE, 2020c). A key aspect for these initiatives will be linking data across organizations and agencies (SPACE, 2020b). Efforts to institutionalize the role of SP into national disaster preparedness strategies should, therefore, include use of forecasts for scale-ups during shocks.



**A number of important insights have also emerged around ‘big issues’ such as financing, universal approaches and the role of SP in a context of increased climate risks. First, the financing of compounding disasters will require even more coordinated approaches.** Disaster relief has traditionally been financed by independent national or regional bodies, international groups and/or multi-lateral bodies, depending on the specificities of the event. However, compounding risks, uniquely affecting different sectors or groups, may require a more coordinated or streamlined approach, which enables flexibility to address the unpredictable financial requirements induced by these events. The COVID-19 pandemic, for example – a health disaster with economic and social impacts akin to natural disasters – demonstrated the relevance of allowing funds allocated to health to flow to disaster response agencies and vice versa (Lind *et al.*, 2020).

**In response to coverage challenges – particularly in adequately reaching informal workers and newly vulnerable groups – there has been increased discussion around universal SP approaches.** As SP systems have been scaled up during the pandemic, not all groups have been adequately included. Universal measures have been presented as a more equitable solution, providing a minimum income for households to fall back on (UNDRR Asia Pacific, 2020c). The Republic of Korea, for example, announced the introduction of an emergency ‘anti-disaster basic income’, resembling a universal approach to provision.<sup>14</sup> Other organizations have advocated for universal SP under the rubric of ‘do good while doing no harm’ policies (UNDRR Asia Pacific, 2020a). These frame universal measures as a ‘no regrets’ strategy, reducing climate-related vulnerability while achieving other socially desirable goals.

**Finally, with the risk of the socio-economic outcomes of the COVID-19 pandemic further entrenching poverty (ILO and ESCAP, 2020), SP can be an important policy option for countries to build longer term systems that are prepared to withstand combined shocks.** Although the efficacy of SP responses to COVID-19 in preventing negative long-term outcomes is not clear, the pandemic spurred an unprecedented expansion of these systems. They have likely provided a buffer, preventing many of the poorest slipping into famine or destitution, and reducing the risk of vulnerable communities becoming entrenched in poverty, for example, within countries in the Asia Pacific (IPC-IG 2020, ILO and ESCAP 2020). Going forward, there is a risk that, without adequate income protection, gains made in poverty alleviation made over the past 20 years will be permanently lost (World Bank, 2020b). With compounding disasters increasing in frequency and further threatening sustainable livelihoods, there is an urgency to ensure that poverty rates do not slide backwards. SP is considered a key policy tool for national governments to prevent this.

### *Areas for further research and operational improvements*

Below is a non-exhaustive list of areas for further research and operational improvements around managing intersecting disasters through SP.

- **Multi-hazard approaches to shock responsive SP.** The examples of climate disasters intersecting with the impacts of the COVID-19 pandemic highlight the need for SP programmes and disaster response to focus on multi-hazard approaches.
- **Innovative coordination across disaster response, SP, health and humanitarian agencies within countries and between state and non-state bodies** (SPACE, 2020a). Countries that had already invested in cross-sectoral coordination, often as an aspect of disaster preparedness programmes, were better placed to scale-up and meet the coverage requirements induced by the pandemic.
- **Collaborative approaches should also ensure that responses are positively, rather than negatively, reinforcing.** Where compounding disaster risks uniquely affect different sectors – such as COVID-19 posing a greater threat to informal workers, while also overburdening the healthcare system – it is crucial that responses do not destabilize each other. For example, ensuring that income coverage is adequate to incentivize workers to follow health advice and self-isolate rather than risk coming to work with COVID-19 symptoms is necessary to keep impacts on the healthcare system manageable.
- **Where possible, financing mechanisms should also be integrated.** Future financing arrangements need to be flexible, sustainable and sensitive to climate change adaptation and mitigation targets. Building a financial infrastructure which allows flows to external agencies when in need and creates this fiscal envelope in a durable, long-term way will be necessary to manage future compounding risks.
- **SP programmes become long-term and durable responses to the complex risks arising from climate change.** The short-term timeframe of most COVID-19 SP responses is a cause for concern. To address both the increase in poverty and vulnerabilities caused by the pandemic, and to prevent future climate-related disasters further entrenching poverty, longer term SP policies that cut across disaster and social welfare sectors are needed.
- **Building stronger SP infrastructure and expanding coverage are important areas.** Digital efforts to ease the registration of new beneficiaries and improve flexibility will be part of the solution. In addition, core SP systems that also reduce climate vulnerability will be important.
- **Explore universal measures to deal with the impacts of compound risks and intersecting disasters.** The definition of ‘universal’ varies between organizations, with some calling for basic-income style systems and others universal coverage that is available only during emergencies. Along these lines, future systems may include a flexible or universal design component to account for an evolving rather than a fixed definition of vulnerability based on the specific needs induced by one or more disaster events.

# Conclusion

During the pandemic, SP has proved to be an invaluable tool in managing downside financial risk, providing households with foundational support to endure the impacts of lost work or other financial shocks. The responses of some countries in creatively using existing SP programmes or building new systems and mechanisms have demonstrated the capability of rapidly integrating SP as a component of disaster risk management. The experiences of implementing these programmes, both in their positive effects on households and for the institutional challenges they pose, provide a test case for the role of SP in climate risk management, and particularly in the management of compounding risks.

However, despite the growth in SP responses to target a greater number of individuals more comprehensively, substantial challenges remain if SP is to be fully integrated into future disaster responses, especially as they become more complex. Compounding risks will continue to present unique and novel challenges for which current approaches to SP for disaster management are not yet suited. Questions remain around the efficacy of different policy approaches, particularly regarding coverage, inclusivity and flexibility. Questions also remain around how best to integrate responses across agencies and institutions, including logistically, organisationally and financially.

The international response to the COVID-19 pandemic has been encouraging. While bringing substantial hardships, the pandemic also presents a generative opportunity to catalyze new solutions and momentum for the use of SP initiatives to manage future compounding disasters. As countries continue to manage the pandemic, climate change and associated disasters loom large, presenting an increasingly urgent logistical challenge for disaster response agencies. By learning from the challenges faced by current approaches, we will be better prepared to manage and adapt to future complex climate-related emergencies.



# Appendix A: Online resources

## *Data dashboards*

International Federation of Red Cross and Red Crescent Societies (IFRC), Disaster Response and Preparedness, available: <https://go.ifrc.org/>

Institute for Health Metrics and Evaluation (IHME), COVID-19 Projections, available: <https://covid19.healthdata.org/global?view=social-distancing&tab=trend>

International Labour Organization (ILO), Social Protection Responses to COVID-19 Crisis Around the World, available: <https://www.social-protection.org/gimi/ShowWiki.action?id=3417>

ILO, COVID-19 and the World of Work: Country Policy Responses, available: <https://www.ilo.org/global/topics/coronavirus/regional-country/country-responses/lang--en/index.htm>

European Commission, INFORM Risk, available: <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk>

Reliefweb, COVID-19 Global, available: <https://reliefweb.int/topics/COVID-19-global>

World Bank, Climate Change Knowledge Portal, available: <https://climateknowledgeportal.worldbank.org/>

World Bank, (ASPIRE) The Atlas of Social Protection Indicators of Resilience and Equity, available: <https://www.worldbank.org/en/data/datatopics/aspire/region/sub-saharan-africa>

## *Data repositories used to build the interactive dashboard*

EM-DAT, the International Disasters Database, available: <https://www.emdat.be/>

John Hopkins University, COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE), available: <https://github.com/CSSEGISandData/COVID-19>

University of Oxford, Oxford COVID-19 Government Response Tracker (OxCGRT), Available: <https://github.com/OxCGRT/covid-policy-tracker>

University of Oxford, Oxford Supertracker, available: <https://supertracker.spi.ox.ac.uk/>

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