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Strengthening the capacity of ASEAN Member States to design and implement risk-informed and shock-responsive social protection systems for resilience

Regional Synthesis Report



Food and Agriculture
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Strengthening the capacity of ASEAN Member States to design and implement risk-informed and shock-responsive social protection systems for resilience

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Executive summary

The Association of South-East Asian Nations (ASEAN) comprises 10 Member States (AMS) with very diverse economies: two are high income (Brunei Darussalam and Singapore), two are upper-middle income (Malaysia and Thailand), and the remaining six are lower-middle income (Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, and Viet Nam). ASEAN is the most disaster-prone region of the world. More than 200 million people in AMS have been affected by disasters from 2000 to 2015 and there have been US\$8 trillion total economic losses in the region in those 15 years. Addressing the root cause of disaster vulnerability in the ASEAN region and building long-term resilience to climate extremes is vital to breaking the cycle of recurrent humanitarian crises and the remaining high levels of poverty in the region. However, climate change is causing an increase in the frequency and severity of hazards and will lead to more disasters.

The complementarity of social protection and disaster risk management (DRM) is increasingly acknowledged by ASEAN. Accordingly, this study, the overarching research question of which is:

- **What factors enable social protection systems and programmes in ASEAN countries to be responsive to shocks and to deliver an effective response?**

This research defines social protection as 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 rationale for shock-responsive social protection being given a front-line role in disaster response include efficiency gains from faster responses, pooling of financial and programmatic resources, and speeding up decision making. Shock-responsive social protection also implies better preparedness for disaster response by improving the resilience of households facing shocks.

Risks and shocks in AMS

This study considers various types of shock although the focus is on climate and weather-related shocks. The table below provides an overview of the main types of shocks affecting AMS:

Table 1: Overview of shocks affecting AMS

Type of shock	Speed	Frequency	Duration	Countries most affected
Earthquake	Rapid	One-off/Recurrent	Short term	Myanmar, Philippines, Indonesia
Volcanic activity	Rapid	One-off	Short/medium term	Philippines, Indonesia
Mass movement	Rapid	One-off	Short term	Malaysia, Myanmar
Storm	Rapid	Seasonal/One-off	Short term	Malaysia, Thailand, Cambodia, Lao PDR, Myanmar, Indonesia, Philippines, Viet Nam
Extreme temperature	Rapid	One-off	Short/medium term	Thailand
Flood	Rapid	Seasonal/One-off	Short/medium term	Malaysia, Thailand, Lao PDR, Myanmar, Philippines, Viet Nam
Landslide	Rapid	One-off	Short term	Indonesia, Philippines, Myanmar, Viet Nam
Drought	Slow	Seasonal/One-off	Medium term/ Protracted	Thailand, Lao PDR
Wildfire	Rapid	One-off	Short/medium term	Brunei Darussalam
Armed conflict	Rapid	One-off/Recurrent	Medium term/ Protracted	Myanmar, Philippines

DRM in AMS

There are a variety of DRM systems across the ASEAN region, although generally speaking AMS have ‘tailored national DRM systems underpinned by legal provisions’ (IFRC 2017). The table below categorises AMS according to their DRM systems:

Table 2: Categorisation of AMS DRM systems

DRM system type	Law/system description	Where/when type used	AMS
Disaster emergency management law	A specific law on disasters, focused on preparedness and response, potentially with elements of early warning and recovery	Tends to be in countries with low hazard exposure, or higher exposure but effective risk governance through sectoral laws, or limited governance capacity	Brunei Darussalam, Malaysia, Singapore
Broad DRM system law(s)	Covers the full spectrum of DRM and establishes specialist national institutions for DRM coordination and at least some local structures or roles	Most common in countries with medium-high exposure that have adopted DRM laws since the mid-1990s. May involve a mix of laws, regulations, and executive orders	Cambodia, Indonesia, Lao PDR (in draft), Myanmar, Thailand, Viet Nam
Broad DRM system law(s) + high DRR priority law	Broad DRM focus (as above) and permanent DRM system; DRR is given a high priority, with emphasis on a whole-of-society approach to disaster risk governance. High degree of detail and broad DRR mandate, with strong vertical and horizontal inclusion	Most of these laws post-date the 2005 Hyogo Framework for Action (HFA) and Indian Ocean Tsunami. Tend to be found in medium- and high-exposure countries that do not have a long tradition of risk governance through sectoral laws and local government	Philippines

These DRM systems face a number of challenges, including the changing scale and nature of disasters, inadequate financing structures, limited updates based on evidence, and a lack of coordination between regional and national entities. Most challenges are associated with governance and institutional coordination, and include issues with coordination and overlapping mandates, lack of technical capacity among staff responsible for implementing DRM (particularly those working at community level), limited capacities for risk assessment and systematic data collection, and challenges in mainstreaming DRM into both sectoral and overall development frameworks. Nonetheless, given the significant alignment between the objectives of DRM and social protection, the actors involved, and their governance, the following synergies between DRM and social protection are possible:

- Both systems can contribute to risk reduction before disasters happen;
- The targeting of assistance could be improved through a joined-up focus on vulnerable groups;
- Embedded social protection systems can improve the speed of disaster response; and
- During the recovery stage of the DRM cycle, a holistic ‘build back better’ response involving, for example, cash-for-work programmes delivered through social protection systems, will improve people’s long-term resilience.

Social protection in AMS

The state of social protection in the ASEAN region can be characterised as diverse. Thailand and Viet Nam are the only AMS with social security legal coverage that is comprehensive in scope, with at least one statutory programme in each social security policy area (old age, survivors, child and family, maternity, sickness, unemployment, employment injury, disability/invalidity). The Lao PDR and Singapore statutory schemes cover seven areas, excluding family and unemployment benefits respectively. Social security in the Philippines also offers protection in seven areas, with limited provision of unemployment benefits. Myanmar enacted its social security law in 2012; it includes provisions for most social security branches but only certain ones have been implemented so far. The remaining ASEAN countries possess a more limited scope of legal coverage, with statutory programmes in fewer than six social security policy areas.

Targeting mechanisms for existing social protection programmes have largely been designed with the objective of reaching the chronic poor and therefore have limited capacity to capture the effects of sudden crises. Their delivery mechanisms often still manually transfer benefits (e.g., through post offices) rather than electronically, although efforts are being made to transfer to electronic payment systems. Meanwhile, the information systems that underlie these programmes are also somewhat limited in terms of their coverage, although they are evolving. Beneficiary registries, integrated beneficiary registries, social registries, and integrated social registries are all present among AMS but, overall, are not risk-informed and tend to be developed for social assistance targeting only. Programmes collect limited information to measure exposure to risks and vulnerability, and as these systems are not designed to detect or predict sudden changes to socioeconomic outcomes, they tend not to provide operationally relevant information to plan and implement responses to shocks. Thus, their ability to provide the backbone to a shock-responsive social protection system remains limited.

Shock-responsive social protection in AMS

An in-depth analysis of the factors enabling social protection systems to be responsive requires studying several different aspects of such systems, from high-level policies to operational mechanisms. These different aspects are categorised in the following manner:

1. Coordination and institutional capacity
2. Delivery systems
 - a. Targeting mechanisms
 - b. Delivery mechanism
3. Information systems
4. Financing mechanisms

Shock-responsive social protection systems require predictable, protected, and layered funding sources. When policymakers consider the use of a social protection system to address emergency needs, there are a number of strategies available:

1. **Vertical expansion:** increasing the benefit value or duration of an existing programme or system;
2. **Horizontal expansion:** adding new beneficiaries to an existing programme or system;
3. **Piggybacking:** using a social protection intervention's administrative framework, but running the shock-response programme separately;
4. **Alignment:** designing an intervention with elements resembling others that already exist or are planned, but without integrating the two. Governments may align their systems with those of humanitarian agencies or vice versa; and
5. **Design tweaks:** making small adjustments to the design of the core programme.

Unsurprisingly, keeping in mind the above, there are only a handful of documented experiences in the use of social protection to respond to shocks in the ASEAN region. The majority involved either vertical or horizontal expansions of existing social protection programmes and are discussed in detail in Section 5.1. Going forward, there are various enabling and constraining factors for risk-informed and shock-responsive social protection systems at play in the ASEAN region. Table 3 summarises the most important of these:

Table 3: Factors affecting shock-responsive social protection in ASEAN

	Enabling factors	Constraining factors
 <p>Coordination</p>	<ul style="list-style-type: none"> ● Most AMS have DRM frameworks, laws, or plans ● Strong cooperation and collaboration among AMS, in particular through the ASEAN Secretariat ● Many countries give social protection a role in support to people affected by disasters 	<ul style="list-style-type: none"> ● Limited implementation and enforcement of DRM legislation; limited mainstreaming of DRM ● Social protection, especially social assistance, is still a developing sector in the region ● Limited coordination and interaction between DRM and social protection sectors
 <p>Delivery</p>	<ul style="list-style-type: none"> ● High levels of mobile network coverage and access to formal banking (in selected AMS) ● Systems for transferring cash electronically are already in place in selected AMS 	<ul style="list-style-type: none"> ● Some reluctance in regard to direct cash transfers to beneficiaries ● Limited flexibility of delivery systems ● Social protection targeting mechanisms largely designed with objectives different from capturing the effects of sudden crises
 <p>Information systems</p>	<ul style="list-style-type: none"> ● Ongoing development of social protection information systems ● Most countries have Early Warning Systems (EWS) in place 	<ul style="list-style-type: none"> ● Limited data integration in the social sector and beyond ● Beneficiary registries are not risk informed ● No link to pre-defined social protection triggers
 <p>Financing</p>	<ul style="list-style-type: none"> ● Most AMS have budget provisions for DRM activities 	<ul style="list-style-type: none"> ● No predefined commitments to channel resources to the poor and vulnerable through social protection programmes after a shock ● Existing public financial management procedures can be cumbersome in some countries ● Lack of predictable, protected, and layered funding sources

Recommendations

Based on the various enabling and constraining factors detailed above, this study proposes the following recommendations for AMS, the ASEAN Secretariat, and development partners.

Recommendations for AMS

Coordination and capacity

1. Continue investing in the development of social protection systems for their regular mandates (not necessarily shock response). Stronger social protection systems – with robust administrative capacity, high coverage, and provision of adequate support – offer more opportunities for shock response.
2. Conduct diagnostics and feasibility assessments to assess whether it is appropriate to use social protection systems to respond to covariate shocks. Social protection programmes are useful for shock response only if they offer a solution that improves on alternatives. It is therefore vital to conduct assessments and address the policy trade-offs before attempting to make social protection systems more responsive.
3. Nascent social protection systems should not be overburdened. The role of these systems in shock response itself presents a policy trade-off. On the one hand, new systems can be tailored from the early stages onwards to be more risk-informed and responsive. On the other, asking systems that still do not manage to achieve their core objectives to respond to large-scale shocks could have negative effects. Balancing such issues must be taken into account.

With these recommendations in mind, if the intention of the AMS is to use social protection to respond to shocks, then:

4. Consider first developing a coherent strategy establishing *how* to respond through social protection. This strategy should be part of an integral DRM strategy and aligned with any existing strategy on social protection. Furthermore, there should be consensus among stakeholders in government on the action plan and financing of this strategy, backed by appropriate legislation where necessary.

Delivery systems

5. If horizontal expansions (or piggybacking) are envisaged, delivery mechanisms must be adapted to manage additional recipients. This could include: protocols for increasing coverage, transfer values, and frequency; defining operational and transaction costs; requirements and processes for enrolling new beneficiaries; and even pre-printing temporary programme identity cards. Likewise, the information technology platform behind the delivery mechanism needs to be ready to operationalise these special protocols.

Information systems

6. Consider adapting social protection information systems (social registries or beneficiary registries) to provide information on vulnerability, exposure to shocks, and operationally relevant data for planning and responses.
7. Horizontal expansions require data on non-beneficiaries. This can be gathered via: increased interoperability and data sharing across existing databases; social registries with data on both beneficiaries and non-beneficiaries; the pre-registration and enrolment of households for an eventual scale-up; *ex post* data collection; and the use of programme data on former beneficiaries or eligible households not covered due to quotas or budget restrictions.
8. As important as investing in the availability of data is investing in its quality. There are five quality dimensions to consider: completeness, relevance, currency, accessibility, and accuracy. In practice, this implies conducting regular updates of registries through surveys or allowing for self-reporting with some form of external validation.
9. The extent to which existing Early Warning Systems (EWS) data could be used as triggers requires further research, potentially by governments. Although EWS triggering social protection responses (automatically or not) is a good approach, it requires very strong commitment from governments and may be feasible only for certain types of disaster (e.g., droughts).

Financing mechanisms

10. Any strategic plans relating to shock-responsive social protection must be costed first to allow policymakers to assess potential synergies across programmes and efficiency savings through the pooling of resources.
11. Consider developing protocols and commitments for channelling support through social protection programmes based on the shock-responsive social protection strategy.
12. Beyond social protection, consider layering risks through different financing instruments. This means introducing instruments that finance responses for differing scales of shock.
13. Support disaster financing and public financial management reform to ensure timely response to both large-scale emergencies (which can access state-level funds) and small, recurrent disasters (which are financed locally).

Responses

14. Vertical expansions are in theory administratively easier to implement because they do not entail providing support to new beneficiaries.
 - a. However, global evidence suggests that preparedness is essential for a timely vertical expansion: experiences outside ASEAN show that without adequate planning and preparedness, the decision-making process behind vertical expansions and the availability of funding can delay the response for months.
 - b. Vertical expansions exclude those affected by the shock who are not beneficiaries of the social protection scheme expanded. As a consequence, governments will need to be assisted with complementary interventions.
 - c. The effectiveness of vertically expanding programmes in response to shocks will depend on the correlation between the eligibility criteria and their implementation and the effect of the shock and the policy priorities.

- d. When planning vertical (and horizontal) expansions it is important to assess the adequacy of the type and value of the transfers. Cash transfers, for example, require functioning markets.
 - e. To increase the coverage of the response, governments can consider vertically expanding more than one programme at the same time.
15. Horizontal expansions are in theory more complex because they entail increasing a programme's caseload, which can have substantial administrative implications:
- f. Although planning and preparedness is always important, it is more so in the case of horizontal expansions. Delivery systems would need to be adapted to scale up.
 - g. There are very few experiences of social protection programmes expanding horizontally in response to disasters in the developing world and none in the ASEAN region. [This shows that this is a challenging policy choice.]
 - h. Effective communication to beneficiaries and the wider population about the temporary nature of the expansion is essential.
16. Piggybacking has the advantage that governments can pick the administrative process or system that best fits the response. This could imply relying on a registry or database, the payment mechanism, or the personnel of a social protection programme. One of the advantages is that even programmes or systems that are not robust enough to expand can still have administrative capacities that could be used for shock response.
17. Finally, keep in mind that vertical and horizontal expansions, piggybacking, design tweaks, and alignment can be combined or sequenced, they are not mutually exclusive.

Recommendations to the ASEAN Secretariat

1. Continue to facilitate cooperation and coordination among AMS through meetings, workshops, and exchange programmes.
2. Promote a vision emphasising the importance of: i) understanding disaster risk and social protection being risk-informed; ii) developing integrated solutions to shocks; iii) developing flexible systems; and iv) developing adequate financing strategies.
3. Provide technical assistance on capacity building, particularly in areas of risk modelling, policy planning, and budgeting.
4. Use regional platforms to facilitate peer learning and knowledge dissemination on best practices, challenges, and achievements.
5. Promote the importance of assessing and evaluating AMS's experiences on shock-responsive social protection to improve both evidence and future policies/programmes.
6. Facilitate research on specific issues.
7. Facilitate further interaction between the social protection and DRM sectors through joint planning and budgeting exercises, workshops, and policy coordination.
8. Support the development of regional insurance facilities by connecting public and private sector stakeholders and facilitating technical assistance.

Recommendations for development partners

The recommendations for development partners are similar to those for the Secretariat. In addition to providing financial resources, partners have different areas of expertise that could be used to provide technical assistance to governments. Some specific areas include:

1. Conducting diagnostics and feasibility assessments for shock-responsive social protection programming.
2. Financing and providing technical support to shock-responsive social protection pilots.
3. Providing technical assistance to improve the coverage and effectiveness of social protection and DRM systems and support government contingency planning efforts.
4. Developing agreements with governments for channelling emergency support through social protection, if feasible.

5. Building government (or, where relevant, NGO) capacity by facilitating social protection and emergency response instead of direct provision.
6. Promoting an evidence-based debate on the use of cash in shock responses in countries hesitant to move to this approach.
7. Facilitate South-South learning in the Asia-Pacific region by sharing lessons learnt from Indonesia, Nepal, Sri Lanka, and Fiji, for example.
8. Providing support in household assessment tools to ensure adequate information is collected for horizontal expansion and risk-informed social protection strategies.
9. Pilot-test an initiative to link horizontal and/or vertical expansions to EWS.

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List of abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ADB	Asian Development Bank
AHA	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
AMS	ASEAN Member States
APCC	APEC Climate Center
ASEAN	Association of Southeast Asian Nations
BLT	Bantuan Langsung Tunai
Cat-DDO	Catastrophe Draw-Down Option
CBT	Community-based Targeting
CCA	Climate change adaptation
CCT	Conditional Cash Transfer
DAC	Development Assistance Committee
DDPM	Department of Disaster Prevention and Mitigation
DILEEP	DOLE Integrated Livelihood and Emergency Employment Programme
DOLE	Department of Labour and Employment
DRM	Disaster risk management
DRR	Disaster risk reduction
DSWD	Department of Social Welfare and Development
ECHO	European Civil Protection and Humanitarian Aid Operations
EWS	Early Warning System
FAO	Food and Agriculture Organization of the United Nations
FSI	Fragile States Index
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HFA	Hyogo Framework for Action
MMK	Myanmar Kyat
ILO	International Labour Organization
MOLISA	Ministry of Labour, Invalids and Social Affairs
NCCDP	National Community-Driven Development Programme
NDRRM	National Disaster Risk Reduction and Management
NDRRMC	National Disaster Risk Reduction and Management Council
NDRRMP	National Disaster Risk Reduction and Management Plan
NGO	non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
OPM	Oxford Policy Management
PDR	People's Democratic Republic
PKH	Program Keluarga Harapan
PMT	Proxy Means Test
PNPM Mandiri	Program for Community Empowerment Mandiri
PSI	Political Stability Index
SEADRIF	South-East Asia Disaster Risk Insurance Facility
SSDM	Social Service Delivery Mechanism
UCDP	Uppsala Conflict Data Programme
UCT	Unconditional cash transfer
UDB	Unified Database
UN	United Nations

UNICEF	United Nations Children's Fund
UNISDR	United Nations Office for Disaster Risk Reduction
USD	United States Dollar
WFP	World Food Programme

CHAPTER 1

This section presents the background of the regional study and lists key study limitations.

1.1 Background

The Association of South-East Asian Nations (ASEAN) comprises 10 Member States¹ and was formed in 1967 (see Figure 1). The ASEAN region comprises very diverse economies – this can be seen in the figure below, which classifies ASEAN Member States (AMS) by World Bank income classifications: two AMS are classified as high income (Brunei Darussalam and Singapore), two as upper-middle income (Malaysia and Thailand) and the remaining six as lower-middle income (Cambodia, Indonesia, Lao PDR, Myanmar, Philippines and Viet Nam) (World Bank 2018a). The region has experienced sustained economic growth during the last decade, although growth rates have slowed down in recent years. That said, the growth outlook for ASEAN is positive: the Organisation for Economic Co-operation and Development (OECD) estimates that Southeast Asia is expected to achieve average growth of 5.2% between 2018 and 2022 (OECD 2018).

ASEAN has made remarkable progress in poverty reduction in recent decades: over the last 25 years the proportion of poor people has been reduced by more than two-thirds (based on a poverty line of US\$1.25 a day) (ASEAN Secretariat 2017). Nevertheless, significant income inequalities exist, both within the AMS and across the region. Overall, the ASEAN region has made great strides in reducing absolute poverty and improving standards of living for its citizens. At the same time, rising levels of economic growth have been accompanied in many countries by increased income inequality and vulnerability to shocks.

AMS are located in the most disaster-prone region of the world (ASEAN Secretariat, 2016). More than 200 million people in the AMS have been affected by disasters from 2000 to 2015 and there have been US\$8 trillion total economic losses in the ASEAN region in those 15 years (Babel 2016). Climate change causes an increase in the frequency and severity of hazards, which will lead to more disasters, 80% of which are climate related. Addressing the root cause of disaster vulnerability in the ASEAN region and building long-term resilience to climate extremes is vital to breaking the cycle of

Figure 1: Map showing the AMS and their dates of accession into ASEAN



Source: ASEAN Secretariat (2017)

¹ Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam

recurrent humanitarian crises and the remaining high levels of poverty in the region.

The complementarity of social protection and disaster risk management (DRM) is increasingly acknowledged by ASEAN, as reflected in recent agreements and declarations concerning both subjects. This is in line with the increased global interest in shock-responsive social protection, with several development partners, regional coordination bodies like ASEAN, and country governments initiating research and policy dialogue on the issue (OPM 2015a; Hallegatte, Vogt-Schilb, Bangalore & Rozenberg 2016; ADB 2018a; Michal Rutkowski 2018; WFP 2018, p. 2018). If they were informed by risk variables and equipped with flexible delivery modalities, updated systems would not only enhance the effectiveness of disaster response and recovery but also reduce vulnerabilities and strengthen resilience while promoting livelihood transformation.

As part of the ASEAN–UN Joint Strategic Plan for Disaster Management 2016–2020, the UN Food and Agriculture Organization (FAO), in collaboration with the United Nations Children’s Fund (UNICEF), International Labour Organization (ILO), United Nations Office for Disaster Risk Reduction (UNISDR), and WFP is implementing a joint project, funded by the European Civil Protection and Humanitarian Aid Operations (ECHO), entitled **‘Strengthening the capacity of AMS to develop risk-informed and shock-responsive social protection for resilience’**. The project aims to strengthen the capacity of the AMS to design and implement risk-informed and shock-responsive systems to reduce the vulnerabilities of at-risk populations, strengthen their capacity to respond to and recover from shocks, and thus enhance households’ resilience in order to mitigate the effects of shocks and improve preparedness for further crises.

As part of this initiative, WFP’s Regional Bureau for Asia and the Pacific has commissioned a regional study on shock-responsive and risk-informed social protection systems in the ASEAN region. The overarching research question for this regional study is: **‘What factors enable social protection systems and programmes in ASEAN countries to be responsive to shocks and to deliver an effective response?’** This research includes the following studies:

- a Regional literature review – which includes a general overview of recent shocks experienced by countries in the region and of poverty and vulnerability, and identifies experiences in the use of national social protection mechanisms to respond to shocks;

- a Thailand case study – which aims to identify the factors that would enable the national social protection systems to be responsive to shocks;
- a Lao PDR case study – which aims to identify the factors that would enable the national social protection systems to be responsive to shocks; and
- Regional synthesis report – which synthesises the findings of the other products and provides recommendations to the ASEAN Secretariat, AMS, and cooperating partners.

This research will serve as a basis for national and regional dialogue to develop the ASEAN guidelines and protocol under AADMER for Risk Informed Shock Responsive Social Protection.

1.2 Defining key concepts

There are numerous definitions of social protection and these are documented in detail in previous literature reviews on shock-responsive social protection (Beazley, Solórzano & Sossouvi 2016; OPM 2017). **This research defines social protection as 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** (Norton, Conway & Foster 2001). This is in line with the definition stated in the ASEAN Declaration on Strengthening Social Protection, adopted by the 23rd ASEAN Summit in October 2013, in Brunei Darussalam (see Box 1).

Humanitarian assistance is defined in the guide to Principles and Good Practice of Good Humanitarian Donor-ship, agreed in 2003 by a group of international donors, non-governmental organisations (NGOs), and multilateral agencies, as the **resources used to fund ‘actions designed to save lives, alleviate suffering and maintain and protect human dignity during and in the aftermath of emergencies’**. Humanitarian assistance is separate from other forms of development assistance because it is provided in adherence with key humanitarian principles of humanity, impartiality, neutrality, and independence (GHA 2014).

DRM is often viewed as having five focal areas: prevention, mitigation, preparedness, response, and recovery (Baas, Ramasamy, Dey de Pryck & Battista 2008). Establishing a shock-responsive social protection system relates to preparedness, response, and recovery from a disaster, and therefore potentially overlaps with a number of different DRM activities and mechanisms (UNISDR 2009).

Box 1: Social protection in ASEAN

Social protection is defined (ASEAN Secretariat, 2013) as interventions that consist of policies and programmes designed to reduce poverty, inequalities, and vulnerability by assisting the poor, at-risk, and vulnerable groups, such as but not limited to persons with disabilities, older people, youth, women, children, undernourished, victims of disasters, migrant workers, as well as families and communities, to:

- i) enhance their capacities to better manage risks; and
- ii) enhance equal access to essential services and opportunities on a rights-based/needs-based approach.

In AMS, social protection covers, but is not limited to, social welfare and development, social safety nets, social insurance, social assistance, and social services.

Social protection is a cross-cutting issue, and therefore its implementation requires coordinated and holistic approaches with the involvement of governments, the private sector, development partners, civil society, service providers, and other stakeholders, where appropriate.

Social protection must be adaptive to different risks, such as lifestyle and individual risks, social risks, and emerging risks and vulnerabilities faced by the region, such as, but not limited to, changes in the economy and labour markets and the impacts of climate change, disasters, and economic crises.

Source: (ASEAN Secretariat 2015)

1.3 Conceptualising shock-responsive social protection

This section presents the rationale for shock-responsive social protection, as well as a conceptual framework that will enable the analysis of social protection programmes against the elements of 'shock-responsiveness' and 'risk-informed' and their potential for adaptability to be risk-informed and shock-responsive.

1.3.1 Rationale for a shock-responsive social protection system

The ASEAN Guideline on Disaster-Responsive Social Protection provides some rationales for shock-responsive social protection (ASEAN Secretariat 2018). These include efficiency gains from faster response to disasters, pooling financial and programmatic resources, and speeding up decision making. Shock-responsive social protection also implies improved preparedness for disaster response through improving the resilience of households exposed to shocks.

The objective of a risk-informed, shock-responsive social protection system is to help build the resilience of households – with special attention on poor and vulnerable households – through timely and effective responses to risks and shocks. By temporarily expanding certain social protection instruments, populations can be better protected from risks and shocks and the effectiveness of scarce response resources can be maximised (ibid.).

Global evidence, to a degree, suggests that an effective social protection system can be used to quickly respond to shocks. The approach can help prevent and mitigate against the impact of shocks, respond to disasters, and support recovery from disasters. It can also save money, as early response is far more cost-effective than late emergency response (see Box 2).

Shock-responsive social protection systems can also be seen to protect and secure socioeconomic gains made by development programmes. The guidelines note that line ministries, especially ministries of social welfare, can plan for disaster response rather than being called upon to respond in an *ad hoc* manner without prior preparation or financing. Furthermore, the potential gains from shock-responsive social protection also apply in contexts where small but recurrent, predictable shocks occur. Shock-responsive social protection has the potential to better manage these constraints (ASEAN Secretariat 2018).

1.3.2 Conceptualising shock-responsive social protection

Social protection can build better coping strategies and prevent negative responses (such as reducing food consumption, taking children out of school, and selling productive assets). Regular social protection schemes (social assistance, social insurance, and employment policies) can provide income support that allows households to encourage livelihood investment, diversify income sources, and develop their human capital and improve their employability. In addition,

Box 2: How shock-responsive social protection can save money

A 2016 economic analysis estimated that the annual savings that would accrue to the Philippines as a result of introducing instruments that support shock-responsive social protection would be US\$6.6 billion (Hallegatte et al. 2016). In other words, these are the typical annual costs that are incurred by households and government when responding to shocks through existing mechanisms. An economic analysis in 2018 found that, relative to typical humanitarian assistance, an *early* humanitarian response in east Africa would save an estimated US\$2.5 billion in humanitarian aid costs over a 15-year period. Social assistance programmes would save US\$3.5 billion per episode over the cost of a late response, or an average of US\$231 million per year. A combined, resilience-building scenario (early humanitarian response + safety nets) could save US\$4.3 billion, or an average of US\$287 million per year. In other words, every US\$1 spent on safety nets or resilience programming results in net benefits (savings) of between US\$2.3 and US\$3.3, respectively (Cabot Venton 2018a, 2018b; Venton 2018).

Source: ASEAN Secretariat (2019). ASEAN Guidelines on Disaster-Responsive Social Protection to increase resilience.

specific environmental conservation projects – for example, through public works – can enhance households' coping capacity at the community level.

In responding to shocks, social protection can provide affected households with extraordinary support by vertically and horizontally expanding existing schemes or utilising existing mechanisms such as beneficiary databases, disbursement mechanisms, networks of social workers, and a state's budget allocation. It can also expand access to social insurance (e.g. unemployment, sickness leave, health, invalidity, and survivors' insurance), allowing for a swift and cost-efficient disaster response.

The conceptual framework for this assignment draws on the earlier theoretical framework developed by OPM

(OPM 2015a; Beazley, Solórzano & Sossouvi 2016) and further adapted for this research. This framework provides a systematic approach that is used in analysing existing literature relevant to answering the core research question: **What factors enable social protection systems and programmes in ASEAN countries to be responsive to shocks and to deliver effective response?**

An in-depth analysis of the factors enabling social protection systems to be responsive requires studying several different aspects of such systems, from high-level policies to operational mechanisms. These different aspects are categorised in the following manner:



Coordination and institutional capacity

A responsive social protection system requires that DRM and social protection sectors, as well as others, work together to maximise their impact. In this component, this report studies existing mechanisms to promote such coordination.

In addition, the capacity of the sectors is fundamental for their ability to respond. This report focuses on studying their mandates, plans, and strategies.

Delivery systems

Delivery systems are the tools, processes, and administrative mechanisms that a programme has in order to operate. Although every delivery mechanism has an important role to play, international evidence shows the following two are key for a system to be responsive and hence these are the ones the report focuses on:

- **Targeting mechanisms** – the capacity of the system to identify and select people affected by shocks; and

- **Delivery mechanisms** – the capacity to transfer cash or in-kind support.

Information systems

Socioeconomic and disaster risk and vulnerability information systems can play an important role in helping to plan responses (*ex ante*) and to identify the affected households (*ex post*).

This component studies the role of data in the social protection sector in responding to shocks, as well as EWS used to inform social protection planning or responses, either automatic, like when an index triggers an automatic expansion, or not automatic – the provision of information and data for social protection policy decision making.²

Financing mechanisms

Responses to shocks through social protection systems require predictable, protected, and layered funding sources.³ This includes *ex ante* and *ex post* mechanisms and commitments and protocols for channelling resources through social protection and to local governments.

All the components above determine the capacity of social protection to respond to emergencies. Based on this framework, when policymakers consider the use of a social protection system to address emergency needs, there are a number of strategies that they may employ to scale up the overall level of support that the system provides to vulnerable people (OPM 2015a):

1. **Vertical expansion:** increasing the benefit value or duration of an existing programme or system;
2. **Horizontal expansion:** adding new beneficiaries to an existing programme or system;
3. **Piggybacking:** using a social protection intervention's administrative framework, but running the shock-response programme separately;
4. **Alignment:** designing an intervention with

elements resembling others that already exist or are planned, but without integrating the two.

Governments may align their systems with those of humanitarian agencies or vice versa; and

5. **Design tweaks:** making small adjustments to the design of the core programme.

The typology for SRSP presented in this and numerous other studies is very helpful to guide discussions on response options, yet it does hide some the complexity that underpins each option and how it is ultimately put into practice. It also places little attention on options which are a) beyond the social protection sector or b) which require longer term (not temporary) changes within the social protection sector itself. In practice, there are a number of considerations when assessing programme scale up – these are highlighted in the Box 3 below.

Similarly, it is important to note that these strategies of scale-up are not without risk and should not be seen as standalone responses to shocks, including natural disasters. The figure below shows the targeting challenge that systems face when they are expanded vertically or horizontally, or when they allow responses to 'piggyback' on them. First, the basis of the targeting challenge is the fact that the households affected by the shocks are not necessarily beneficiaries of existing social protection programmes, or included in the social registry or other registries. Consequently, despite having strong targeting programmes and systems, horizontal expansion would be necessary in any case. However, the greater the coverage of programmes and registries, and the better the quality of the data they contain, the easier it will be to respond. In principle, if beneficiaries of social protection programmes could be easily reached with vertical expansion and non-beneficiaries whose information is in the registries could easily be reached with horizontal expansion, then the challenge would be reaching those affected households that do not belong to either of these two categories (Barca & O'Brien 2017; O'Brien, Scott, et al. 2018).

² This study does not assess the effectiveness of EWS. It will limit the analysis to identifying experiences in which such systems have been used to inform or trigger social protection responses.

³ Although this study does not conduct a thorough assessment of disaster risk financing, it does review the existing mechanisms and their capacity to fund social protection responses.

Box 3: Considerations for scale up

Expanding coverage to more people (beyond current social protection beneficiaries) can be achieved in many ways – each with very different practical implications. Importantly, some of these are short term ‘fixes’ while others are longer term solutions.

Horizontal Expansion

Expansion of existing programmes can be achieved in many different ways, including via:

- Extending the programme’s geographical coverage: this is often a longer-term process and typically leads to expansions which are permanent (not temporary).
- Enrolling additional beneficiaries who meet the programme’s usual criteria e.g., through an extraordinary enrolment campaign. This is likely to lead to expansions which are permanent (not temporary). Examples include:
 - Newly eligible households because of changed household conditions.
 - Eligible households excluded because of quotas/budget restrictions.
 - Eligible households excluded because of a wide range of other reasons (e.g. direct, indirect and opportunity costs of applying, etc.).
 - Former beneficiaries no longer in the programme. This was recently the case in Mexico (see Box 2): a simple and swift option as operational data is already available for former beneficiaries.
- Temporarily modifying the eligibility criteria. In practice, this may be operationalised either via:
 - A new registration/enrolment process (either census survey or potentially on-demand) aimed at identifying affected households and assessing eligibility on the basis of the revised criteria.
 - Utilising existing social protection data (for example non-beneficiary information from a Social Registry) and applying new criteria.
- Enabling access to those who are already enrolled, but who are not currently receiving because of requirements/qualifying conditions. A common example is the waiving of conditionalities.⁴

Piggybacking

Two of the most frequent options that may be of use when extending support to new caseloads are:

- Using existing data (e.g. from a programme database or Social Registry)
- Using existing registration/enrolment approach and capacity.

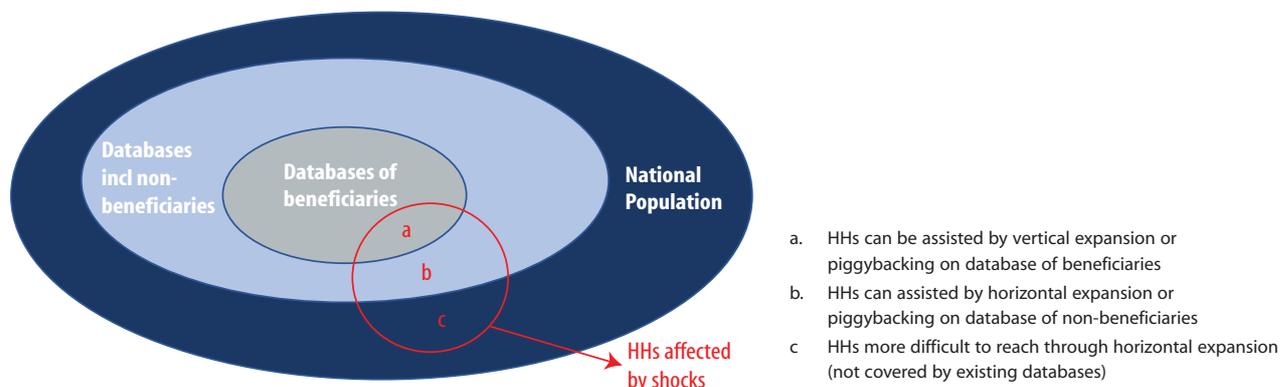
Alignment

Alignment can be done with different objectives and time horizons, across the humanitarian and SP sectors through:

- Creation of new ‘emergency’ programmes that align to existing (or potential future) social protection programmes (Short term).
- Creation of new social protection programmes (Longer term).
- Permanent changes in eligibility criteria/design to better cover populations in need (Longer term).

Source: Beazley, R., Solórzano, A. & Barca, V. (Forthcoming). Study on Shock-Responsive Social Protection in Latin America and the Caribbean: Summary of Key Findings and Policy Recommendations. Revised version. Oxford Policy Management Ltd.; World Food Programme.

Figure 2: The targeting challenge in shock-responsive social protection



Source: OPM (2015) and Barca (2017).

⁴ This is can also be referred to as a ‘design tweak’

1.3.3 ASEAN's approach to shock-responsive social protection

The conceptual framework for this study is in line with the aspirations of the ASEAN Secretariat in enabling social protection systems to be shock-responsive. AMS recognise the role played by social protection in building resilience, before disasters and when disasters strike (Peyron Bista 2016). For instance, 'building disaster-

resilient nations and safer communities' is one of the seven social welfare and protection elements outlined by the Mid-Term Review of the ASEAN Socio-Cultural Community Blueprint (Asher & Zen 2015). Also, under the AADMER Work Programme (2015-2020), two key priority programmes – 'Protect' and 'Advance' – elaborate the role of social protection in building resilience toward natural disasters (see Box 4) (ASEAN Secretariat 2016).

Box 4: AADMER Work Programme

To reduce disaster losses in the ASEAN region and jointly respond to disaster emergencies, ASEAN foreign ministers signed AADMER in 2009 (ASEAN Secretariat, 2010), which led to the first regional work programme (2010-2015). The following AADMER Work Programme 2016-2020 (ASEAN Secretariat, 2016) is a five-year rolling programme that seeks to build a resilient ASEAN community to reduce disaster losses and collectively respond to disasters. This is to be undertaken through the implementation of eight priority programmes that cover the entire range of thematic areas in disaster management: Aware, Build Safely, Advance, Protect, Respond As One, Equip, Recovery, and Lead.

Under the 'Advance' Priority Programme, the ASEAN Secretariat aims to build a disaster-resilient and climate-adaptive ASEAN Community by:

- increasing replicable programmes and models of building community resilience;
- incentivising the development of innovative community-based initiatives on DRR and climate change adaptation (CCA);
- earmarking a portion of development funds and climate finance for community-led research and development on natural resource management and social protection; and
- building partnership with academic institutions for implementing/testing DRR and CCA actions to address new risks, and embedding this in social protection programmes.

The 'Protect' Priority Programme outlines the role of social protection in building resilience and risk management. This programme provides a risk transfer mechanism that can reduce vulnerability and increase the resiliency of AMS through four major strategies:

1. First, providing risk transfer through financial intermediaries to those who make up the backbone of ASEAN's food supply and service sectors, such as small and medium-sized enterprises, micro-enterprises, and smallholder producers.
2. Second, including a prevention and mitigation component to government social protection programmes for the poorest.
3. Third, insurance embedded to the providers of essential services so that in times of disaster they will be able to recover quickly and continue providing lifelines to the affected populations.
4. Fourth, a government-led risk-pooling mechanism to ensure critical infrastructure, like schools, hospitals, and other major public infrastructure, is insured so that it is rebuilt quickly and can again provide services to affected populations.

Source: ASEAN Secretariat. 2016. AADMER Work Programme 2016-2020. Jakarta: The ASEAN Secretariat.

At the seminar on the potential of social protection to build resilience to disasters in November 2016, AMS agreed on the following recommendations to continue promoting linkages between social protection and disasters:

1. improve understanding of social protection opportunities for managing disaster risks;
2. strengthen institutional capacities and governance for better managing disaster risks through social protection;
3. invest in social protection to build resilience; and

4. seize opportunities to 'build-back-better-safer-smarter' through the enhancement of social protection systems.

Furthermore, ASEAN's approach to social protection is also in line with the lifecycle approach adopted by the UN. For instance, the vision and goal for the ASEAN Regional Framework and Action Plan (adopted at the 27th ASEAN Summit in 2015 in Malaysia) includes: 'Uplift the quality of life of ASEAN peoples by 2025 and enhance the well-being, welfare, and livelihood of the peoples through their life cycle, respectively' (ASEAN Secretariat 2015).

1.4 Limitations of the study

ASEAN is a large and diverse body of nations comprising ten member states. This report presents a synthesis of the evidence gathered on shock-responsive social protection in ASEAN through a literature review, two country case studies: one in Thailand, an upper middle income country and one in Lao PDR, a lower middle income country. The report also draws upon draft reports of four in-depth country case studies conducted by the Food and Economy Group as part of the joint UN project (Myanmar, Viet Nam, Cambodia, and the Philippines).

This study covers information that was publicly available in the English language. It draws directly on two light case studies conducted by the study team but relies on secondary information collected in other AMS by external parties. Evidence of gaps in DRM service provision is also based mainly on documentation review. The overall depth, breadth, and quality of the information available therefore varies.

This report is intended to provide a synthesised overview of evidence and policy issues relating to shock-responsive social protection in ASEAN. It is not intended to be a set of policy guidelines. Its findings will, however, feed into the regional guidelines and protocols for disaster and risk-informed social protection systems in ASEAN.

1.5 Report structure

The remainder of this report is structured as follows:

- Section 2 describes risks in AMS;
- Section 3 describes the region-wide institutional context with respect to DRM;
- Section 4 describes the region-wide institutional context with respect to social protection;
- Section 5 analyses experiences of shock-responsive social protection in the region; and
- Section 6 provides policy recommendations.

CHAPTER 2

2

Risks and shocks in AMS

This section provides an overview of the shocks and risks faced in the ASEAN region. A classification of shocks is developed and the shock profile of AMS is examined.

2.1 Classification of shocks

This study considers the following types of shocks: climate and weather-related, armed conflict, socio-political, and economic. The focus, however, is on climate and weather-related shocks, in line with the Terms of Reference for the study.

The table below provides an overview of the main types of shocks that affect AMS and notes the countries most affected by each shock type in the region. It provides detail on each shock type, according to speed, scale, frequency, and duration; these characteristics are described further below.

Speed and duration of shocks

Over the past three decades, AMS have mostly been affected by disasters that arrive quickly with limited warning ('rapid-onset disasters'). The degree to which warnings are possible varies by shock type: earthquakes, for example, are typically not predictable, whereas events like cyclones and riverine and coastal floods can usually be predicted in advance, to varying degrees. Predictability depends not just on shock type but on capacity for early warning (see Section 3.2.1), which includes meteorological and hydrological forecasting capabilities, systems for communicating risks, and systems for initiating procedures to reduce or mitigate the impact of the oncoming hazard.

The only type of slow-onset disaster to have affected the region is drought. Slow-onset disasters can develop over a period of months or even years. Just as the 'start' of the slow-onset disaster is difficult to ascertain, as they are closely bound up with other environmental and socioeconomic dynamics, establishing an 'end' is similarly challenging. Although the numbers of droughts reported have been few, the associated damage is difficult to quantify for various reasons and it is assumed that the economic losses resulting from them have been quite significant (UNISDR 2010).

Duration varies widely between shock types, and in some cases between different manifestations of the same shock type. Earthquakes and storms are typically of a short duration, ranging from a few minutes to several hours, while droughts are typically more protracted in nature, lasting from a few weeks to months or years. The most recent regional level drought took place between 2015 and 2017, where during the course of the two years most of Southeast Asia was affected, specifically parts of Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Viet Nam. Several areas suffered agricultural losses for at least one season.

Conflict-related shocks can also vary widely in duration, depending upon how they are classified. In Myanmar, for example, state-based conflicts are considered to be of a protracted nature, having been ongoing since 1989.

It should be noted that the impact of a shock on socio-economic outcomes or monetary losses is not necessarily correlated with its duration.

Frequency of shocks

Frequency varies per shock type and also within different manifestations of the same shock type. The ASEAN region is one of the most earthquake-prone areas in the world, with the Philippines and Indonesia incurring the most number of earthquakes since 1970. Conflict, where prevalent, has also been recurrent.

The frequency of some types of events is more clearly patterned than others. Meteorological events are typically related to systemic phenomena such as the El Niño Southern Oscillation and seasonal weather changes, and can also be influenced by geographical factors such as topography. Floods, storms, and droughts have a recurring pattern across the region; in some places they are seasonal, and overall their frequency and severity tend to be exacerbated by the El Niño Southern Oscillation: during the Southwest Monsoon period (June-September), the impact of El Niño is drier-than-normal rainfall. The impact of La Niña is felt during the November-January period, with wetter-than-normal conditions.

Table 4: Classification of shocks

Type of shock	Shock sub-types ^a	Speed	Scale ^b	Frequency	Duration	Countries most affected
Earthquake	Tsunami, ground movement	Rapid	Small (Richter Scale 1-4) – Severe (Richter Scale >4)	One-off/ Recurrent	Short term	Myanmar, Philippines, Indonesia
Volcanic activity ^c	Ash fall, lava flow	Rapid	Non-explosive (VEI 1) – very large (VEI>5)	One-off	Short term/ medium term	Philippines, Indonesia
Mass movement ^d	Downhill movement of rocks/earth	Rapid	High/Low/ Medium Intensity	One-off	Short term	Malaysia, Myanmar
Storm ^e	Tropical/ Convection	Rapid	Moderate/ Severe/Minor	Seasonal/ One-off	Short term	Malaysia, Thailand, Cambodia, Lao PDR, Myanmar, Indonesia, Philippines, Viet Nam
Extreme temperature ^f	Cold wave	Rapid	Extreme	One-off	Short term/ Medium term	Thailand
Flood ^g	Coastal, riverine, flash	Rapid	Minor/ Moderate/Major	Seasonal/ One-off	Short term/ Medium term	Malaysia, Thailand, Lao PDR, Myanmar, Philippines, Viet Nam
Landslide ^h	Mudslide, landslide	Rapid	High/Low/ Medium Intensity	One-off	Short term	Indonesia, Philippines, Myanmar, Viet Nam
Drought ⁱ	Drought	Slow	Moderate (-2 PDSI)/Severe (-3 PDSI)/Extreme (-4 PDSI)	Seasonal/ One-off	Medium term/ Protracted	Thailand, Lao PDR
Wildfire ^j	Forest fire	Rapid	Moderate/Severe	One-off	Short term/ Medium term	Brunei Darussalam
Armed conflict	State-based, non-state conflict, one-sided violence	Rapid	Minor (less than 25 deaths)/War (more than 25 deaths)	One-off/ Recurrent	Medium term/ Protracted	Myanmar, Philippines

Notes

- ^a Climate and natural shock sub-types are classified based on the Emergency Events Database (CRED 2018); armed conflict sub-types are based on the data from the Uppsala Conflict Programme (UU-UCDP 2017).
- ^b Scales for each shock are specified: for earthquakes, volcanic activities, and droughts, commonly used scientific scale ranges are indicated.
- ^c VEI = Volcanic Explosivity Index (Newhall & Self 1982).
- ^d Based on intensities dependant on a set of parameters such as debris flow velocity, path length and mass (Corominas 2008).
- ^e Based on the scales used by the Japan Meteorological Agency, categorised according to wind speed and maximum sustained winds: Severe (Violent, very strong typhoon); Moderate: (Typhoon, Severe Tropical Storm); Minor (Tropical depression) (WMO 2015).
- ^f Extreme heat: temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks; Extreme cold: marked drop in temperatures/cooling of the air/invasion of very cold air, over a large area, that may or may not lead to wind chills (ibid.)
- ^g Based on the common flood severity categories used by the United States Weather Services: Minor – minimal or no property damage, but possibly some public threat or inconvenience; Moderate – some inundation of structures and roads near streams. Some evacuations of people and/or transfer of property to higher elevations are necessary; Major – extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations (NSSL 2018).
- ^h Climate-related shocks and natural disasters are described for the period 1970-2018. Other types of shock are described for the period 1989-2018.
- ⁱ PDSI = Palmer Drought Severity Index (Dai & National Center for Atmospheric Research Staff 2017). Negative 2 is moderate drought, negative 3 is severe drought, and negative 4 is extreme drought.
- ^j Based on acres damaged/burnt per event.

Source: Compiled by authors

Climate change is likely to have the dual effect of making extreme weather events more severe and less predictable. Southeast Asia is vulnerable to increases in heat extremes and increased intensity and slow speed of tropical cyclones. Specifically, the Philippines could be affected by more severe storms, Viet Nam might grapple with increased flooding in urban areas (due to sea intrusion in the Mekong Delta), and Thailand might face increased coastal floods due to land subsidence (Adams et al. 2013). Research has also suggested that the frequency of extreme El Niño events is related to global warming, and will persist even after 1.5 degrees of warming stabilisation (Wang et al. 2017).

Scale

All of the shock types listed can vary widely in terms of scale, and indeed have done so in the region in recent decades. Figure 5 (in Annex A) shows the variation in scale of earthquakes in the region since

2007 and demonstrates considerable variability. Smaller-scale events are less likely to be reported, which can skew comparative reporting on scale. Since 1970, earthquakes experienced in the AMS have ranged from being small to severe, while droughts have also varied in widely terms of their severity. A significant number of floods in the region, however, have been major, requiring significant evacuation of people and extensive inundation of structures and roads. Armed conflict during the timeframe has not resulted in any casualties.

2.2 Regional overview of shocks

The ASEAN region is highly disaster prone. Hydro-meteorological hazards are the most frequent natural shocks affecting the region, with annual occurrences of riverine and flash floods, tropical cyclones, and droughts (see Table 5 and Figure 6).

Table 5: Climate and natural disasters: summary of disaster risk per country

Country	Key climatic/Natural disasters ^a	World Risk Index (WRI, 2012-2016) (%) ^b	WRI (2012-2016) – Exposure (%)	WRI (2012-2016) – Vulnerability (%)
<i>High-income countries</i>				
Brunei Darussalam	Minimal; flood risk	17	41	41
Singapore	Minimal; flood risk	2	8	29
<i>Upper-middle-income countries</i>				
Malaysia	Floods, tropical storms	6	15	44
Thailand	Floods, tropical storms, drought	6	14	46
<i>Lower-middle-income countries</i>				
Cambodia	Floods	17	28	60
Lao PDR	Floods, droughts, storms	6	10	59
Myanmar	Floods, tropical storms, earthquakes	9	15	60
Viet Nam	Floods, tropical storms	13	25	49
Philippines	Floods, tropical storms, earthquakes, volcanic activities	27	52	51
Indonesia	Floods, earthquakes, volcanic activities, landslides	10	19	53

Notes:

^a In terms of the number of occurrences between 1970 and 2018.

^b The WRI is calculated with 28 individual indicators and rates the country disaster risk owing to five natural hazards: earthquakes, cyclones, floods, droughts, and sea-level rise. The index is calculated by multiplying two components: exposure to natural hazards and vulnerability to natural hazards. Higher index values suggest higher exposure or vulnerability. The values mentioned are average scores between 2012 and 2016.

Source: (UNU-EHS 2016)

Figure 7 in Annex A presents information relating to shocks associated with conflict and violence: the Philippines and Myanmar have witnessed the most deaths as a result of 'state-based' armed conflict since 1989 (UU-UCDP 2017).

The Fragile States Index (FSI)⁵ also provides a perspective on vulnerability to shocks, particularly related to governance, economic situation, and conflict. Figure 8 shows how AMS rank on the FSI and provides a breakdown of the indicators that contribute

⁵ Scale ranges from 100 (high fragility) to 1 (low fragility), derived from a set of 10 indicators displayed in Figure 5 (FP 2017).

to the index. In Myanmar, Cambodia, the Philippines, and Lao PDR, issues with 'state legitimacy', 'security apparatus', and 'public services' have driven up their ranking on the index (FP 2017).

Politically, there have been significant upheavals in the region over the last two decades. The World Bank's Political Stability Index (PSI)⁶ shows that, between 1996 and 2016, higher-income countries such as Brunei Darussalam and Singapore have stayed stable, with minimal/no incidences of political disruptions. There is more variation in other countries, which rank lower. Thailand, the Philippines, and Myanmar have remained within the (low) range of 0 and 35 on the index (WB-WGI 2016).

In terms of economic shocks, the region has suffered from two financial crises in the last two decades: the Asian financial crisis in 1997 and the global crisis a decade later (2007). Both had a significant impact upon growth rates, with Singapore, Thailand, Malaysia, and Cambodia considered to be the worst affected by the 2007/08 crisis. Growth has picked up again after the global economic crisis, especially in countries like Brunei Darussalam, Indonesia, Malaysia, the Philippines, and Thailand. However, Cambodia, Lao PDR, Myanmar, and Viet Nam, which are all lower-middle-income countries, still lag behind compared to their wealthier neighbours in the region (see Figure 9) (UN-DESA 2015 and UNCTAD 2017).

Fiscal issues highlight economic vulnerability in some AMS; for instance, Lao PDR has a high fiscal deficit despite a high growth rate (roughly 7% per year over the period 2000-2009) (Ngozi Okonjo-Iweala, Victoria Kwakwa, Andrea Beckwith & Zafar Ahmed 1999). Fluctuating global oil prices are also a source of economic shocks; for instance, a global price spike caused a shock to the Indonesian economy in 2004, contributing to a significant increase in inflation. Less developed countries, such as Myanmar, experience vulnerability in relation to relatively weak domestic financial institutions; for example, the country experienced a banking crisis in 2003 due to the collapse of small financial institutions (Turnell 2003). While gross domestic product (GDP) growth has been steady ever since the economy opened up in 2012, the economy is vulnerable to political developments as well as the management of the fiscal deficit (IMF 2018).

2.3 ASEAN member states shock profile

This section gives an overview of historical data on the casualties and damages suffered by each country due to climate/natural and conflict-related shocks.⁷

2.3.1 High-income countries

Brunei Darussalam

There is limited shock data available for Brunei Darussalam, but the country is generally considered to be low risk. It lies outside the tropical cyclone belt, so is not vulnerable to storms. Major flood or drought events have also not been reported, though Brunei Darussalam has experienced six minor flash floods since 1960, with casualties estimated at a total of 10 (AHA & JICA 2015).

Excessive rainfall in 2009 and 2010 also reportedly caused inundation damage in the capital city of Bandar Seri Begawan. The EM-DAT database reports damages of US\$2 million as a result of a forest fire in 1998 (CRED 2018).

Brunei Darussalam functions as an absolute monarchy and has not experienced any national or sub-national political conflicts since 1984, when it became an independent country. There have been no reported armed conflict-related casualties since 1989. Recent inter-state territorial issues have included the Limbang territory dispute with Malaysia, which was resolved in 2009. Brunei Darussalam also continues to claim ownership of the Spratly Islands, which is disputed but has not led to any armed conflict.

Singapore

Singapore is considered the least disaster-prone country in the ASEAN region, along with Brunei Darussalam (APCC 2017). Since 1970, there have been no natural or climate shock-specific casualties or damages documented. The main risks are earthquakes (due to Singapore's proximity to the Sumatra Faultline) and floods as a consequence of heavy rainfall.

Singapore is politically stable and demonstrates limited vulnerability to political and economic shocks; it ranks the highest in the region on the Political Stability Index

⁶ The World Bank Governance Indicators report indicators for six dimensions of governance, including political stability and absence of violence. This index ranges from 0 to 100, with higher values corresponding to better outcomes.

⁷ Uses Emergency Events Database for data on climate and natural shock occurrences between 1970 and 2018 (CRED 2018) and the Uppsala database for data on armed conflict between 1989 and 2018 (UU-UCDP 2017).

(99.52) and the lowest on the Fragile States Index (32.5). The country has not experienced national or sub-national armed conflicts since 1989.

2.3.2 Upper-middle-income countries

Malaysia

Droughts, floods, and storms are the three main types of natural and climatic shocks that Malaysia has experienced since 1970. Both flash and riverine floods have caused significant loss of life and property over the last decade. There have been 46 reported flood events, resulting in damages of US\$1,467,500. Drought in 2014 affected 2.2 million people (CRED 2018), of which a significant amount was due to resultant displacement. Though not recurring, incidences of storms and landslides have also taken place.

There were 71 deaths as a consequence of state-based armed conflict in 2013. One of the major events was the 2013 Lahad Datu standoff, a territorial dispute, where six militants were killed. Malaysia had intermittent inter-state conflicts in 1958-1960, 1974-1975, and 1981. However, with a Fragile States Index score of 65.4 (2017) and a Political Stability Index of 50 (2016), Malaysia has had limited national and sub-national political upheavals more recently.

Thailand

Thailand has experienced recurring droughts, storms, and riverine floods. In 2017, riverine floods led to 118 deaths and affected 2 million people. In 2011/12, Thailand experienced its most catastrophic flood (the so-called 'Mega Flood'), resulting in the deaths of 1,026 people; total economic damages and losses reached THB 1.44 billion (approximately US\$45.7 billion) (Department of Disaster Prevention and Mitigation – DDPM, 2015). In 2016, a severe drought affected 76 provinces (ADRC, 2017). Tropical cyclones have also cost the Thai economy US\$46 billion in between 1970 and 2018.

Since 2003, Thailand has been facing a territorial conflict in the southern provinces. There have been fluctuations between military rulership and democratic set-ups since the 1980s. Though a majority of the armed conflicts have been inter-state/one-sided, from 2004 to 2014 violent events erupted as a consequence of political crises (The Asia Foundation 2017).

2.3.3 Lower-middle-income countries

Cambodia

In terms of shocks, Cambodia is most affected by droughts and floods. The most recent drought event in 2016 affected 2.5 million people. Incidences of riverine and flash floods have claimed the most lives, with total deaths amounting to 1,641 people (1970-2018). Out of all natural and climate shocks, floods account for the most repeated occurrences. Between 1997 and 2015, Cambodia has also witnessed four severe tropical cyclones (CRED 2018).

As evidenced by its Fragile States Index ranking (which is the second highest among the AMS) and its relatively lower rank on the World Bank's political stability indicator, Cambodia still suffers from political instability (WB-WGI 2016). There has been a significant amount of political turmoil even though the country has seen national elections since 1998; the 2013 national elections resulted in six months of anti-government protests (The Asia Foundation 2017).

Indonesia

Indonesia is the most vulnerable to landslides in the region and has also had the most devastating earthquakes in the region over the last 10 years. Floods have claimed 6,232 lives since 1970, and have caused estimated damages of US\$6.7 billion during this period (CRED 2018). Volcanic activity is also quite high; the most recent major eruption was that of Mount Merapi in 2010, which resulted in 323 casualties (ibid.).

Indonesia has steadily improved its performance on the Political Stability Index (WB-WGI, 2016). The national-level legislative and presidential elections in 1999, 2004, 2009, and 2014 have resulted in local tensions, but these have not escalated enough to result in damage/casualties (ibid.).

Lao PDR

Lao PDR is one of the countries with the lowest level of exposure to natural hazards in the ASEAN region. It has mainly experienced floods, droughts, and tropical cyclones between 1970 and 2018. The country experienced 23 flood events since 1970, making floods the most recurring natural/climate shock. The riverine flood in 2013 affected over 500,000 people, while flash floods in 2011 resulted in 34 casualties. The southern

and central parts, along the Mekong River, are the most affected (APCC 2017). Tropical storms have been limited to only six occurrences since 1970, but have caused damages worth US\$405 million during this period (CRED 2018). Typhoon Ketsana in 2009 and typhoons Haima and Nokten in 2011 resulted in deaths and economic losses (Farhat Forthcoming; ADPC, NDMO & MoLSW 2012).

Myanmar

According to the United Nations Office for the Coordination of Humanitarian Affairs, Myanmar has been ranked as the most disaster-prone country in Southeast Asia.⁸ It is affected by a range of climate and natural shocks, including tropical cyclones, floods, landslides, tsunamis, and droughts. There have also been major earthquakes over the past decade (in 2011, 2012, and 2016). Flood and storms, however, are the most recurring shocks and also account for the largest portion of both casualties and damages. In 2008, Cyclone Nargis caused a death toll of 140,000; in 2012, a riverine flood affected 85,000 people while in the same year a 6.8 magnitude earthquake in northern Myanmar affected approximately 1,150 people (CRED 2018).

Among the AMS, Myanmar fares the worst in terms of the Fragile States Index. This stems from the fact that Myanmar was ruled by a military junta between 1988 and 2011, and despite the elections in 2005 and 2010 there have been continued national- and sub-national-level political conflicts. At the local level, new election laws (passed in 2012) have been a source of political disputes (The Asia Foundation 2017).

The Philippines

Since 1970, the country has experienced repeated incidents of riverine and flash floods, tropical storms, and earthquakes. Floods have affected a total of 33 million people during this time period (CRED 2018). The

Philippines also falls under the Pacific Ring of Fire, which results in frequent seismic and volcanic activity in the region. Since 1970, the total damage due to earthquakes has been US\$598 million. The country has witnessed almost one severe earthquake every year since 2000, with Richter scales touching 7.6. In terms of damage and fatalities caused, the most recent severe earthquake was in Bohol and Cebu in 2013. This earthquake measured 7.2 on the Richter scale and resulted in 230 deaths (UN-OCHA 2014).

The state of conflict and violence in this country. Shows that there has been an insurgency in Mindanao, where the Muslim minority has demanded and eventually negotiated agreements on autonomy in 2012 and 2014. However, these agreements are yet to be passed, and the protracted deliberations have resulted in increased incidents and violent threats (The Asia Foundation 2017).

The country ranks third highest on the Fragile States Index. There are both national and sub-national political tensions. Local electoral tensions have also resulted in violent outbreaks over the last five years.

Viet Nam

Viet Nam has been affected by tropical storms, floods, and droughts since 1970. Floods have affected roughly 32 million people during this time period, and resulted in 5,457 casualties (CRED 2018). The damage caused by floods in the last 10 years is the third largest among the AMS (APCC 2017). Storms have also wreaked havoc in the area, with Typhoon Damrey resulting in 147 deaths in 2017.

Viet Nam currently does not face any national or sub-national political conflicts and falls in the mid-range in terms of the regional Political Stability Index, at 51.43 (WB-WGI 2016).

⁸ See www.unocha.org/myanmar.

CHAPTER 3

3

DRM in ASEAN member states

This section provides an overview of policy, institution and programme landscape on DRM in each AMS, based on available literature, having relevance to Social Protection.

3.1 Overview

DRM is the application of policies and strategies to prevent new disaster risk, reduce existing disaster risk, and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses (UNISDR 2009).

While multiple frameworks have been proposed to support understanding and assessment of DRM, in general they share the core premise that DRM comprises a series of actions prior to, during, and after a disaster.

These actions involve risk prevention, risk reduction, management of residual risk (including risk transfer), disaster preparedness, disaster response, and disaster recovery. As such, DRM comprises but goes beyond related concepts such as Disaster Risk Reduction (DRR) and Emergency Management. It is closely linked to the concept of resilience (Le Quesne et al. 2017).

This light-touch review explores the existence and strength of DRM systems in AMS, based on key themes and indicators. It is not an exhaustive scoping study of DRM systems in each country; rather, experiences are grouped to highlight trends and themes, particularly as they relate to the subject of social protection.

The following thematic areas, and associated indicators, will be explored in this chapter.

Table 6: Framework for DRM assessment

Theme/indicator	Description
DRM institutional framework	Institutions play a key role in articulating and operationalising DRM frameworks. DRM is a cross-cutting topic, the achievements of which must involve action from different organisations, vertically and horizontally dispersed. It is addressed (explicitly or implicitly) by a wide range of sectoral policy and regulatory documents. DRM institutions need to mediate the links between these various agendas. Often, specialised DRM actors play an important coordinating and awareness-raising role (FAO 2008, p. 200).
Applicable global and regional DRM frameworks and processes	Another layer of DRM governance is provided at regional and global levels. At the global level, the main reference is the UNISDR-coordinated framework treaties: from 2005-2015 the Hyogo Framework for Action (HFA) and now (2015-2025) the Sendai Framework. Some regional organisations, like ASEAN, have DRM governance frameworks that member states might be encouraged or obliged to apply.
Existence, scope, and function of early warning system (EWS)	EWS are critical components of DRM systems, particularly the preparedness and response phases. The status of EWS is therefore an important indicator of DRM readiness.
DRM financing framework	Sufficient financial resources and well-designed financial mechanisms are essential to effective DRM. At a national level, DRM financing typically comprises a variety of mechanisms and sources. A financing strategy provides coherence to the varied sources of funds, and enables prioritisation and alignment with DRM strategic priorities.

3.1.1 DRM institutional framework

DRM institutional frameworks vary greatly between different systems of government, formality, and styles of national legislation. Some degree of variation is natural and appropriate, as systems must fit the context of their operation, which is determined by a variety of factors including degree and type of exposure, type of political

system, degree to which risk management is already regulated by other legal frameworks (e.g. planning regulations), etc.

IFRC (2017) undertakes a comprehensive review of DRM systems in AMS. This review applies a conceptual framework that classifies countries based on the nature and scope of their DRM systems. **An overall finding is**

that AMS in general have ‘tailored national DRM systems underpinned by legal provisions’ (IFRC 2017).

Table 7 provides a more specific categorisation of AMS countries according to variations in their DRM systems.

Table 7: Categorisation of DRM systems of AMS

DRM system type	Law/system description	Where/when type used	AMS
Disaster emergency management law	A specific law on disasters, focused on preparedness and response, potentially with elements of early warning and recovery	Tends to be in countries with low hazard exposure, or higher exposure but effective risk governance through sectoral laws, or limited governance capacity	Brunei Darussalam, Malaysia, Singapore
Broad DRM system law(s)	Covers the full spectrum of DRM and establishes specialist national institutions for DRM coordination and at least some local structures or roles	Most common type of DRM in countries with medium-high exposure that have adopted DRM laws since the mid-1990s. May involve a mix of laws, regulations, and executive orders	Cambodia, Indonesia, Lao People’s Democratic Republic, Myanmar, Thailand, Viet Nam
Broad DRM system law(s) + high DRR priority law	Broad DRM focus (as above) and permanent DRM system; DRR is given a high priority, with emphasis on a whole-of-society approach to disaster risk governance; high degree of detail and broad DRR mandate, with strong vertical and horizontal inclusion	Most of these laws post-date the 2005 HFA and Indian Ocean Tsunami. They tend to be found in medium- and high-exposure countries that do not have a long tradition of risk governance through sectoral laws and local government	Philippines

Notes: In Lao PDR the official DRM law is still being drafted (WFP and OPM 2018. Lao PDR Case Study)

Source: Adapted from IFRC (2017)

As this analysis indicates, governments in the region have moved some way toward establishing institutions predicated upon a holistic concept of DRM, instead of just emergency response and relief. In several cases, such a shift can be traced to the occurrence of a major disaster; the Indian Ocean tsunami in 2004 is of particular note for the scale of devastation, and linked

directly to the formation of Indonesia’s contemporary DRM system and the tweaking of several others. Hurricane Nargis had a similar stimulus in terms of Myanmar’s DRM system (OPM 2015b). This is illustrated in the legislation upon which DRM systems are based – Box 5 presents a summary of key DRM legislation in AMS.

Box 5: Key DRM legislation in AMS

- **Cambodia:** Law on Disaster Management 2015, followed by the National Action Plan for DRR 2014-2018.
- **Malaysia:** Civil Defence Force Act 1951 (recently amended) and National Security Council Directive No. 20 (Policy and Mechanisms on National Disaster Relief and Management) (1997) (DRM law under development (IFRC, 2017)).
- **Lao PDR:** National Strategic Plan on DRR, and the National Disaster Management Action Plan (draft DRM law under consideration) (IFRC, 2017).
- **Philippines:** National DRR and Management Act of 2010 (Republic Act 10121) and subsequently the National Disaster Risk Reduction and Management (NDRRM) Plan 2011-2028.
- **Indonesia:** Law Number 24 of 2007 concerning Disaster Management (new draft law under consideration (IFRC, 2017)).
- **Thailand:** Disaster Prevention and Mitigation Act 2007 and the National Plan on Disaster Prevention and Mitigation 2015.
- **Viet Nam:** Law on Natural Disaster Prevention and Control 2013 and the National Strategy for Natural Disaster Prevention, Reduction and Control 2007.
- **Myanmar:** Disaster Management Law (2013) and Disaster Management Rules (2015).
- **Brunei Darussalam:** Strategic National Action Plan for DRR.
- **Singapore:** Civil Defence Act and the Fire Safety Act, and additional regulations.

Source: Authors

The Philippines' National DRR and Management Act of 2010 shifted a longstanding government focus on relief to risk reduction and prevention, and thereby from a reactive stance to a more proactive one (Petz 2014). This Act also devolved significant responsibilities to the DRM to the local level, something it has in common with actions initiated in other countries; for example, Indonesia's Law Number 24/2007 was followed by several enacting documents including a requirement for all provinces to establish disaster management plans.

Several countries acknowledge resilience and/or DRM in broader socioeconomic development planning frameworks. For instance, Malaysia's 11th National Plan 2016-2020 focuses on climate-resilient development and acknowledges the role of preparedness and prevention for DRM along with response and recovery. In Myanmar, the National Social Protection Strategic Plan (2014), Medium Term Sector Plan (2018-2022) and the Myanmar Sustainable Development Plan (2018-2030) plan to support policies, legal instruments and programmes that prevent and alleviate economic and social vulnerabilities, and facilitate the ability to better manage and cope with shocks that arise from humanitarian emergencies and/or sudden loss of income Government of Myanmar and UNICEF (forthcoming). This is important, as a demonstration of mainstreaming and an appreciation of the far-reaching developmental implications of DRM as opposed to treating it as a series of isolated incidents. However, acknowledgement on paper does not necessarily equate to action in practice, particularly noting trade-offs, resource constraints, and other influences on the political economy of decision making.

Several countries have established institutions dedicated to DRM, the mandates of which usually include a coordination function. In several cases these institutions report directly to the prime minister (e.g., Thailand and Lao PDR) or president (e.g., Indonesia and the Philippines), representing an important direct line of access to a decision making that is not only authoritative but has a cross-cutting (rather than sectoral) mandate.

It is relatively common to have in place inter-ministerial committees or councils that are typically responsible for establishing and overseeing policy direction on DRM. Lao PDR's National Disaster Management Committee represents 12 different parts of government. Within the Philippines' NDRRM Centre, certain ministries take the lead for different areas of DRM (see Box 6). For example, disaster response is the responsibility of the Department of Social Welfare and Development, while responsibility for disaster prevention and mitigation lies with the Department of the Interior and Local Government (Petz

2014). The armed forces are often deployed to carry out large disaster responses. For instance, the Asia-Pacific series of Conferences on Military Assistance to Disaster Relief Operations took place over a five-year period between 2005 and 2010, and were conducted to develop collaborative guidelines to improve foreign and regional military disaster response operations. These conferences led to the creation of a Regional Consultative Group on Humanitarian Civil-Military Coordination for Asia and the Pacific in 2014, which allows humanitarian, civilian, and military actors to coordinate disaster response planning (UNOCHA 2017).

While more than half of the countries' DRM laws mention or provide for consultation with NGOs, civil society, and/or affected communities, these are mostly general statements of an aspirational nature (IFRC 2017). There are exceptions: for instance, the Disaster Risk Reduction Working Group in Myanmar, which had 53 member organisations in 2015, is seen by some country stakeholders as a landmark for DRR in its mandate to bring different actors together (OPM 2015b). In Lao PDR, the Philippines, and Thailand, the law provides for representation of stakeholders in decision-making bodies. The Philippines' NDRRM Centre involves representatives from NGOs, academia, religious communities, and the private sector. In Indonesia, DRM fora (FPRB) involving local government and civil society have been established in 19 provinces and 45 districts. Also, Malaysia formalised its National Platform for DRR in 2013, which includes private sector representatives.

Republics or federated nations tend to have vertically dispersed structures for DRM governance. In Lao PDR, provincial committees are chaired by vice provincial governors and have representation from all departments. DRM structures are also in place at district and village levels, although coverage has not yet fully been achieved at these lower levels. In Indonesia, all provinces have regional disaster management authorities and more than 90% of districts and cities have their own local DRM agencies (APCC 2017).

As described above, on paper the institutional frameworks for DRM within ASEAN countries are generally comprehensive and reflect contemporary paradigms of integrated climate risk management. However, there are inevitable challenges in realising this vision in practice. Of these challenges, not least is the fact that, as a cross-cutting issue, an integrated DRM paradigm requires a wide range of institutions at different horizontal and vertical levels to be on board, revising their own approaches and institutional cultures.

Box 6: DRM institutional set up in the Philippines

The Philippines has developed comprehensive legislation and institutional arrangements to govern DRM. Administrative structures are established to ensure vertical integration of DRM and a coordinated response to disasters at the local level. These are supported by an alignment of DRM and social protection in policy and planning. One agency/line department is responsible for overall coordination in disaster response.

The 2010 Disaster Risk Reduction and Management Act established the National Disaster Risk Reduction and Management Council (NDRRMC) as a council of stakeholders headed by the Department of National Defence responsible for managing DRR in the country. The NDRRMC structure is replicated at regional and local levels to ensure vertical integration of DRM.

The country's Development Plan and the National Disaster Risk Reduction and Management Plan 2012-2028 (NDRRMP) outlines the activities, outputs, and expected outcomes for each of these thematic areas of responsibility.

The Department of Social Welfare and Development (DSWD) is the lead agency for providing social protection as well as protective services to households in crisis situations. The NDRRMP recognises the need for cohesion between social protection and DRR and the 2007 official definition of social protection is quite broad and thus also includes humanitarian assistance programmes. In addition, the DSWD is the government's lead agency for the UN cluster system during response phase. Because of this institutional arrangement, social protection programmes are well positioned to respond to be shock-responsive.

Under the national DRM framework, DSWD takes overall responsibility for coordination of the thematic area of disaster response. Aside from coordinating disaster response, DSWD is also a lead agency and implementing partner across the prevention and mitigation, preparedness, recovery, and rehabilitation pillars of the NDRRMP. The relief operations of DSWD are managed within a separate bureau of the Operations and Programmes Group – the DReaMB. DReaMB leads on the planning, coordination, and monitoring of all disaster response efforts. At the regional level, activity is coordinated by the DRM unit of the Regional DSWD Office.

When a state of calamity is declared, the regional director can issue a Regional Special Order to all social welfare and development staff at regional, provincial, and municipal levels who are mandated to support disaster response where needed, such as identifying and verifying households or distributing relief goods. Thus, there is already an existing institutional mechanism for linking those involved in social protection administration to administration of disaster response, and those involved in the administration of social protection programmes are already familiar with the ways of working in the implementation of humanitarian assistance.

Source: Kardan (2018); Bowen (2015); Bayudan-Dacuyucuy and Baje (2017); Smith et al. (2017).

- **Implementation and enforcement of legislation.**

While frameworks might be clear and comprehensive on paper, they are not necessarily reflected in the set-up and functioning of institutions in practice. Weak technical and governance capacity, resource inadequacy, and a lack of data and systems to enable action (such as risk analytics) are all important considerations. Several countries disperse functions of DRM governance vertically and, in general, at lower levels of governance these challenges are commonly evidenced (e.g. OPM (2015) on Myanmar's township disaster management committees).

- **Defining roles and responsibilities.** DRM naturally involves many different institutions across sectors (horizontal coordination) and levels (vertical coordination) of governance. Clearly defining the roles of these institutions, in relation to one another, is a substantial task – and one that is often incomplete. In Indonesia, for example, despite an elaborate and detailed body of official documentation and a strong central agency, further

work is needed to develop institutional frameworks that clearly define the respective roles and responsibilities of national-level ministries/agencies, and between national, provincial, and local governments (ibid.).

- **Overcoming existing silos.** Governments are typically structured according to thematic, geographic, or operational areas of work, which enables efficiency but can create artificial 'silos' that prevent effective collaboration. While in some cases DRM can effectively be led by a single institution, in many cases it requires collaborative action to be effective. For example, working at the river basin or watershed level is necessary to build resilience to floods in a sustainable manner, but institutional fragmentation across the water supply, energy, and agriculture sectors may constrain this (World Bank, 2017). Urban development, too, demonstrated this prerogative, as drivers like lack of planning for housing and services, as well as rapid and uncontrolled population growth, escalate risk exposure and vulnerability.

- **Weak multi-stakeholder governance systems.** The existence of cross-governmental and multi-stakeholder fora to support DRM governance was discussed as a positive feature of regional DRM frameworks in the previous section. However, there are challenges in optimising the use of these bodies. In the case of Viet Nam, it is observed that the mandate of the DRM coordination body overlaps to some extent with that of other committees (e.g., climate change and water resource management). Further, there are gaps in critical functions that are not clearly within the remit of any of the bodies, such as integrated drought risk management.
- **Effective mainstreaming.** While several of the DRM institutions mentioned above are mandated to promote and support mainstreaming, this objective is often constrained by lack of sustained resourcing and political attention, as well as the significant vested interests that prevent change.

3.2 Global and regional DRM governance frameworks

Regional cooperation in Southeast Asia on DRM has existed since the 1970s, during which the Declaration on Mutual Assistance on Natural Disasters was passed, along with other relevant initiatives (Petz 2014). A landmark occurred with the signing of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) in July 2009 (see Box 4). AADMER is a regional framework for cooperation, coordination, technical assistance, and resource mobilisation for DRM and emergency response. It remains one of the few binding single-issue DRM treaties in the world. A further relevant document in the regional DRM system is the ASEAN Vision 2025 on Disaster Management, which was endorsed by AMS in December 2015. The Vision outlines the strategic direction for ASEAN between 2015 and 2025. It identifies three strategic elements: institutionalisation and communications, finance and resource mobilisation, and partnerships and innovations.

Several of the AMS legal frameworks on DRM include specific provisions about international treaty obligations, although none refer specifically to implementing AADMER (IFRC 2017). For example, Cambodia's Disaster Management Law empowers the National Committee on Disaster Management to lead in the coordination and implementation of international cooperation, collaboration, and international assistance.

The Sendai Framework for DRR was adopted at the 3rd World Conference in Sendai in March 2015. It is the successor to the Hyogo Framework for Action (HFA), which was operational between 2005 and 2015. ASEAN countries were in general proactive in relation to the HFA, as demonstrated by their submitting voluntary reports within the formal windows, and also as demonstrated by the influence of the HFA upon the evolution of national DRM institutions away from a pure relief focus to a broader concept. In line with the move from a relief focus to a broader DRM focus, the Sendai Framework envisages a role for social protection that goes beyond providing support in the aftermath of a disaster; it highlights the importance of promoting and supporting the development of social protection as DRR measures linked to and integrated with livelihood enhancement programmes.

Reporting against the Sendai Framework has not yet begun; it involves far more detailed data inputs than under the HFA. However, it is a positive sign in terms of probable future engagement that Malaysia and Lao PDR completed the Sendai Framework Data Readiness Review in 2017, and that Indonesia, Myanmar and the Philippines partially completed the review. This voluntary review provides 'valuable reflection on the state of overall readiness of Member States to report' against the Sendai Framework (UNISDR 2017).

3.2.1 Early Warning System

Effective EWS need four components, which should be coordinated across institutions and across levels: (1) detection, monitoring, and forecasting of hazards; (2) analysis of the risks involved; (3) dissemination of timely warnings, which should carry the authority of the government; and (4) activation of emergency plans to prepare and respond (WMO, 2017).

Specifically in relation to detection, monitoring, and forecasting of hazards, meteorological data collection has improved significantly across the ASEAN region (APCC 2017). Indonesia, Viet Nam, and Thailand have seen particular improvements in terms of meteorological gauging networks. Several countries in ASEAN operate numerical forecasting models for early warning, mostly for floods and typhoons. There are also some initiatives to monitor drought conditions via satellite imagery. However, there is still progress to be made: statistical models are relatively rare, as are any kind of forecasting models for more localised types of shock, such as landslides. Seasonal and sub-seasonal

predictions need improvement and systems need harmonising; for example, while a monitoring system using satellite data is operated in the region for rainfall observations, flood forecasting is conducted with conventional empirical relations. This lack of alignment leads to inefficient data utilisation.

In general, EWS are usually developed through a range of policy or regulatory requirements, frequently within the scope of responsibilities of national meteorological and/or hydrological services within environment or natural resource ministries. However, some AMS include general provisions for establishment of EWS in their national DRM laws. Myanmar's law, for example, requires the National Disaster Management Centre to monitor and screen information relating to disasters and prompt dissemination of early warnings, and instructs all agencies to contribute to carrying out and improving early warning systems (IFRC 2017).

Improving EWS has also been a focus of large development assistance programmes in recent years:

- The Government of Canada is funding a US\$7.5 million programme to strengthen multi-hazard EWS in South-East Asia, as well as in small island developing states. The project runs between 2017 and 2021, and involves Cambodia, Lao PDR, the Philippines, Thailand, and Viet Nam. The project will review gaps and needs, strengthen governance arrangements and coordination mechanisms, upgrade forecasting capabilities, and provide regional and country-level technical assistance (WMO 2017b).
- The ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA) also conducts risk identification, early warning, and monitoring. The AHA Centre employs early warning disaster monitoring tools, and shares data with the national disaster management organisations of each of the AMS. The AHA Centre also closely monitors and collates early warning releases by regional hydro-meteorological and geological agencies (AHA 2018).
- The government of Japan has also actively supported the development of EWS in the ASEAN region. Its HFA (2005-2015) aimed to 'Identify, assess and monitor disaster risks and enhance early warning' in the region. Countries offered technical assistance to improve their EWS have included the Philippines (Earthquake and Volcano Monitoring System) and Myanmar (end-to-end early warning system) (Satoru Mimura 2015).

- The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), as part of its Regional Space Applications Programme for Sustainable Development (RESAP), launched the Regional Drought Mechanism in 2013, which is a platform that aims to create regional capacity and inter-regional cooperation to utilize space and in-season ground data for drought monitoring and early warning. Pilot countries include Cambodia and Myanmar, with a service node put in place in Thailand (UNESCAP 2017, p. 2017).
- Strengthening early warning information has been a priority area of work under the US\$30 million Southeast Asia DRM project funded by the World Bank in 2017 in Lao PDR (World Bank 2017b). The country has recently constructed a national EWS for flooding, which reflects the effectiveness principles above. The system establishes procedures based on the severity of the anticipated shock. The Department for Meteorology and Hydrology is mandated to deliver warnings and information to various other actors, including the National Disaster Management Office, the Prime Minister's Office, and national and local radio stations (Sonnasinh).

3.3 DRM budgets and financing frameworks

Several of the DRM laws described earlier make provisions for funding. This is critical to ensuring that DRM frameworks can be implemented effectively; it is not only a question of how much funding is available but, crucially, when it is available and how reliably it can be accessed.

It is common for DRM legislation to mandate allocation of funds from the national budget for DRM purposes, often channelled into a specific fund. In Lao PDR, the amount to be allocated is set by 2013 Prime Minister Decree at 3% of the annual budget. This amount is allocated to the National Emergency Fund, while additional funds go to the Ministry of Labour and Social Welfare for emergency relief (WFP and OPM (2018) Lao PDR Case Study; IFRC 2017). Legislation in Indonesia, too, requires the national government to provide a disaster contingency fund; in addition, the law distinguishes between 'ready funds' and grant-patterned social assistance funds (ibid.). Regional governments are also required to set aside funds for DRM from their regular budget. The financing arrangements for the Philippines DRM system are particularly detailed. The NDRRM fund is financed through national budget allocations. Specifically, 30% of this fund is to be

reserved for quick response and stand-by funds, leaving the rest for broader DRR, preparedness, and recovery activities. The DRRM Act mandates local governments to establish local DRRM funds by setting aside at least 5% of their estimated revenue from regular sources. For Myanmar, post-disaster funding response is through local and sector budget reallocation, often sourced through defence budgets. The government of Myanmar has also established a National Disaster Management Fund (capital of MMK 200 million, replenished annually) under Section 19 of the Disaster Management Law and allocates a National Contingency Budget (MMK 1 billion budget). Up to MMK 20 million from the National Disaster Management Fund can be disbursed without the approval of the National Disaster Management Committee. The President has complete discretion over the use of the National Contingency Budget, but both the fund and budget can receive funds from other development partners. There is also a priority action point in Myanmar's Action Plan on Disaster Risk Reduction, tagged to the Ministry of Planning and Finance, which identifies options for disaster risk financing. Government of Myanmar and UNICEF (forthcoming).

Several countries' disaster management laws specify other sources of financing – commonly, international assistance, international and regional organisations, donations, and voluntary contributions. The Asian Development Bank (ADB), for example, was the first multilateral development bank to have a dedicated disaster policy; DRM, climate change adaptation and risk financing form a key part of ADB's long term strategic framework (ADB 2008). Disaster finance has also been identified as an important component of ADB's climate change priorities, with three key focus areas- : (i) disaster risk reduction to support investments focused at enhancing hazard management and disaster prevention, (ii) climate change adaptation to incorporate adaptive strategies into DRM initiatives, and (iii) disaster risk finance to develop finance capacity, insurance and capital market instruments (ADB 2010). The ADB set up the Integrated Disaster Risk Management Fund (IDRM) in 2013 to support DRM strategies in Cambodia, Indonesia, the Lao People's Democratic Republic, Myanmar, Philippines, Thailand, and Viet Nam. The fund is entirely financed by the Canadian government and has supported projects that improve cross-border DRM efforts, are aligned with regional DRM priorities, introduce innovative solutions, promote community-based and socially inclusive interventions, and support stronger engagement with civil society and private sector actors (ADB 2018b).

The ASEAN region has only recently started exploring layered disaster risk financing strategies.

Layered risk financing provides the flexibility to use different mechanisms to respond to a wide range of severity of events (with different quanta of financing required) on varying timescales. Contingency funds and humanitarian aid are likely to contribute to layered risk financing strategies, but typically other mechanisms, including more innovative mechanisms, are included to meet the needs of more extreme types of risk. Typically, one component of layered financing is ensuring funds for early response in the case of catastrophic events, on the grounds that overall negative financial impact can be reduced if relatively small amounts of financing are made available and deployed quickly (UNESCAP 2018). Globally, and increasingly within the region, sovereign-level insurance is being incorporated into DRM strategies as a means for achieving rapid pay-outs in the event of a disaster in exchange for regular premium payments. In theory, as insurance pays out in the case of a pre-agreed trigger, funds should be provided quickly. In practice, this depends on the quality of the trigger (particularly if the scheme is parametric) and the ultimate impact of the funds will depend upon the efficiency of the delivery systems in place. The World Bank provided support the Government of the Philippines' Insurance System Programme, which provides US\$206 million in coverage against losses from typhoons and earthquakes, and also covers 25 provinces against losses from major typhoons (ibid.).

Potential insurance instruments that can be adopted to address disaster risk but that do not yet see widespread deployment in the region include disaster micro-insurance, property catastrophe risk insurance, and non-traditional agriculture insurance (such as weather index products). Legislation in the Philippines is rare in referring explicitly to use of local DRRM funds for payment of catastrophe risk insurance premiums. However, catastrophe risk insurance is gaining ground elsewhere in the region. Lao PDR, Cambodia, and Myanmar, for example, are working with the World Bank and the Government of Japan on the development of the South-East Asia Disaster Risk Insurance Facility (SEADRIF), a regional catastrophe risk pool. SEADRIF would enable governments to insure themselves against catastrophic risks, and would also provide support to disaster risk finance strategies and other innovative regional financial solutions (World Bank 2017c). It is anticipated that other ASEAN countries could join the facility at a later stage.

Beyond insurance, other mechanisms for ensuring rapid provision of funds in the case of disasters are being explored. For example, the Philippines is also the first country in the region to establish a contingent credit facility with support from the World Bank. This ‘catastrophe draw-down option (Cat-DDO)’ can be

triggered after the government declares a state of emergency. This facility was used following tropical storm Sendony; within two days of the storm, the government was able to access US\$500 million through the mechanism (Rahman 2016).

Table 8: Development aid received by low- and middle-income AMS (2016)

Country	Humanitarian assistance (US\$ million)	Humanitarian assistance as a proportion of GDP (%)	Net official development aid (US\$ million)
Cambodia	2.84	0.014	729
Indonesia	22.35	0.002	-112
Lao PDR	1.56	0.010	398
Malaysia	8.78	0.003	-51
Myanmar	151.82	0.240	1,533
Philippines	26.58	0.009	286
Thailand	43.72	0.011	227
Viet Nam	6.28	0.003	2,893

Note: Negative net ODA figures indicate that annual loan repayments were greater than funding received in the given years.

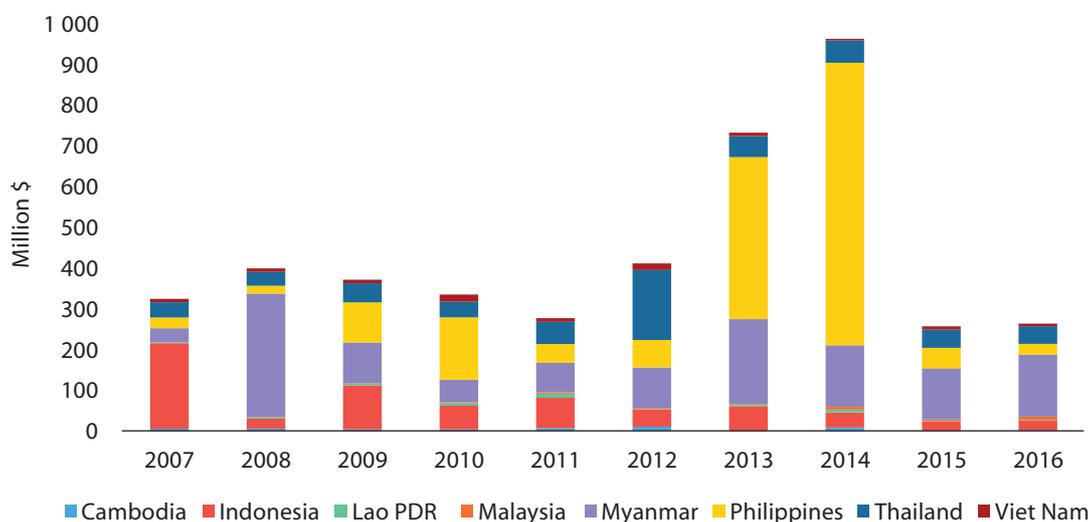
Source: OECD official development aid data (2016); World Bank GDP data (2016).

Humanitarian assistance is also an important source of disaster relief funding for the AMS and has constituted a sizeable proportion of overall development assistance from the OECD’s Development Assistance Committee (DAC) donors (see Table 8). In 2016, Myanmar received approximately US\$151.82 million in DAC humanitarian assistance – the highest in the AMS. Overall humanitarian assistance figures in the region peaked in 2013/14, driven mostly by Typhoon Haiyan in the Philippines (see Figure 3) (ECHO 2014). Viet Nam, Malaysia, Lao PDR, and Cambodia have

received the lowest amount of humanitarian assistance between 2007 and 2016. For Indonesia, Malaysia, and Viet Nam, humanitarian assistance represents a comparatively small proportion of GDP.

Traditionally provided primarily by DAC donors, AMS now also receive funds from non-DAC members as well as through private development assistance. For instance, following the 2005 tsunami, Cambodia received humanitarian assistance from non-DAC countries such as Saudi Arabia (The Asia Foundation 2014).

Figure 3: Humanitarian assistance, low- and middle-income AMS (2007-2016)



Source: OECD data

3.4 Gaps in DRM support and synergies with Social Protection

ASEAN is a highly disaster-prone region and disaster risk is being driven upwards as a result of various influences, including climate change and population growth (see Section 2).

Section 3.1.1 showed that the region has relatively advanced DRM systems on paper but pointed out some of the general limitations and challenges that are faced in implementing those systems. These challenges include the changing scale and nature of disasters, inadequate financing structures, limited updates to DRM systems based on evidence, and the lack of coordination between regional and national entities. These challenges can result in inadequate and/or inefficient support to populations at risk and/or experiencing a disaster.

However, most challenges are commonly associated with governance and institutional coordination, and include issues with coordination and overlapping mandates, lack of technical capacity of staff response for implementing DRM (particularly those working at the community level), limited capacities for risk assessment and systematic data collection, and challenges in mainstreaming DRM into both sectoral and overall development frameworks (Davis 2014).

There is potential to strengthen the complementarities between DRM and social protection systems, although significant synergies do exist already. In general, there is significant alignment between the objectives of DRM and social protection, the actors involved and the governance. The tools used for delivering humanitarian assistance in the case of a disaster, and for social protection, are also often very similar (O'Brien, Scott, et al. 2018). Below, this report explains where such synergies could exist:

Contributing to risk reduction

A core concept of a holistic DRM approach is risk reduction; after all, it makes sense to invest in pre-emptive action that could reduce the impacts of a disaster should it occur. This is particularly true of climate risks, which are commonplace in the region and can occur at a catastrophic scale.

Risk reduction is explicitly acknowledged in DRM strategies for several ASEAN countries – Cambodia's Disaster Management Law calls for mainstreaming DRR

into sector policies, for example, while Indonesia's Disaster Management Law stipulates systematic integration of DRR into development planning at the national, provincial, and local level. Risk reduction is also implicit in many other sectoral and development regulations and policies outside of the formal DRM system, including requirements for land zoning, environmental impact assessments, and construction guidelines.

However, resource sufficiency tends to be a major constraint for DRR. DRM funds tend to go mainly to response (and/or short-term recovery); one challenge for risk reduction is that the measures it entails often exist in a grey area between the mandate of a DRM institution and the mandate of a different sectoral part of government (or level); and may suffer from de-prioritisation and limited enforcement as a result. The value for money of risk reduction measures is generally harder to ascertain than actions taken after a disaster, as it is very difficult to establish a counter-factual against which benefits can be measured.

Social protection may be useful in terms of addressing some of these challenges and building people's social and economic resilience against disasters. Social protection is premised upon a holistic approach to reducing poverty and improving wellbeing that aligns well with the goal of reducing vulnerability that is the core of resilience and of DRR. Regular (multi-year and predictable) cash transfers, for example, can help smooth consumption, build and maintain assets, and develop human capital (Stokkel 2015). Other *ex-ante* solutions include developing a culture of savings, supporting livelihood diversification to adapt to longer-term climate change, providing insurance products to manage risk, and increasing awareness on climate change and disaster risk (ADB 2018a).

These outcomes contribute to better resilience in the face of risks and disasters.

Improving targeting of assistance

Disasters disproportionately affect more vulnerable groups, including women, children, the elderly, people with disabilities, and marginalised groups (Hallegatte et al., 2016). If disaster risk is shared equally among the world's population, it would be equivalent to an annual loss of almost US\$70 for each individual person of working age or two months' income for people living below the poverty line, which would be a significant income shock (UNISDR 2015). There are various reasons for their higher vulnerability, which include limited safety nets, a tendency to live in more exposed (and

often low land value) areas or structures, and difficulty accessing formal support (ibid.). The poor are particularly vulnerable across these groups and in general, as, by definition, they lack assets, opportunities, and social networks that could support them.

While DRM strategies often express an intention to prioritise these vulnerable groups, doing so in practice can be challenging. It requires a comprehensive definition of what comprises vulnerability and how that can be assessed, which in turns needs translating into targeting mechanisms that (particularly in the case of rapid-onset disasters) need to mobilise and process information quickly to enable the provision of emergency aid before critical wellbeing thresholds are crossed. This system needs to be dynamic and able to recognise that those who were poor or vulnerable before a disaster may not represent the entire cohort of people who are rendered poor and vulnerable as a result of a disaster. For slow-onset disasters, such as drought, the nature of poverty and vulnerability and the coping mechanisms that are employed to cope with it change over time and over space. DRM targeting mechanisms should ideally be able to keep up with such changes to ensure efficiency and speed.

Social protection systems can rely on targeting mechanisms that are premised upon an ability to identify manifestations of vulnerability and that are plugged into systems for delivery of regular assistance. DRM could benefit from using social protection targeting mechanisms to help understand who is likely to be worst impacted in the event of a disaster and provide a basis for mobilising and directing resources to those people. The concept of 'scaling up' social protection systems in recognition of increased need following a disaster underscores the alignment between social protection and DRM agendas. Section 5 provides examples of where this has been done in the ASEAN region, with the most prevalent use during Typhoon Haiyan in the Philippines.

Improving the speed of response

Having social protection systems in place before disasters strike can help to make emergency response quicker and more efficient. Targeting, discussed above, is an important aspect of this. Delivering assistance (cash or in-kind) to affected populations quickly, and sustained provision until a transition stage is reached, is critical to effective response. Social protection programmes typically rely on systems for delivering the same goods, often to populations who are very likely to be worst affected in a disaster. Cash and food delivery systems

can be adapted for multiple modalities of relief financing, from donor assistance in cash or in-kind to sovereign insurance pay-outs. For the latter, while the efficacy of the insurance scheme itself is determined by the occurrence and speed of a pay-out following a shock, the actual benefits of insurance for affected populations also rely upon the existence of robust systems to translate a pay-out into assistance.

Additionally, social protection programmes can provide a common platform for pooling disaster response funds, particularly from donors. They can also help resolve the challenge of local authorities being unable to access central-level disaster response funds for small, localised disasters. An example of this is the Pantawid Pamilya conditional cash response transfer programme in the Philippines, which was used to channel donor funding for emergency response efforts following Cyclone Haiyan (a large-scale emergency). With donor assistance, the government scaled up this CCT programme, using the same delivery mechanisms to channel food and cash transfers to affected households in the programme, to identify households for cash-for-work and cash-for-asset rebuilding. The programme was modified to make unconditional transfers available to help disaster-affected families (i.e. including families who were not previously included in the programme) (Stokkel 2015).

Gaps in recovery

The recovery stage of the DRM cycle bridges response and risk reduction. Concepts like 'build back better' illustrate how recovery is perceived as a means not just of getting populations back on their feet but also to help them establish themselves on a developmental trajectory that is less vulnerable to future shocks. This long-term, holistic concept of recovery may be difficult to align with the nature of disaster funding, which is typically narrowly defined. Donors may be less willing to provide funds for actions perceived as developmental rather than crisis response, even though the two agendas are mutually interlinked. Indeed, evidence from OPM's Lao PDR and Thailand case studies also indicated that assistance under the DRM sector was largely limited to response rather than to recovery (WFP and OPM 2018, Thailand and Lao PDR Case Studies).

Social protection potentially has a key role to play in strengthening this holistic, longer-term perspective on recovery and in ingraining risk reduction and resilience into activities. For example, cash-for-work (or public works) programmes are now relatively common in disaster recovery.

CHAPTER 4

4 Social protection in AMS

This section provides an overview of the policy and institutional landscape on social protection in each AMS based on the available literature, key informant interviews, and the fieldwork. This is presented as a synthesis of the information available in the related reports.

4.1 Scope of the research

The ASEAN Declaration on Strengthening Social Protection was adopted by the 23rd ASEAN Summit in October 2013, in Brunei Darussalam. In the declaration, social protection is defined as ‘interventions that consist of policies and programmes designed to reduce poverty, inequalities, and vulnerability by assisting the poor, at risk, vulnerable groups such as but not limited to persons with disabilities, older people, youth, women, children, undernourished, victims of disasters, migrant workers, as well as families and communities to:

- enhance their capacities to better manage risks and
- enhance equal access to essential services and opportunities on a rights based/needs based approach’ (ASEAN Secretariat 2015).

Within the social protection spectrum, this research focuses on schemes implemented by governments (with or without external financing) and includes the following types of programme:

Social assistance: non-contributory transfers

- Social transfers (cash and in kind)
- Social pensions
- School feeding programmes
- Public works or cash for work

Social insurance: contributory transfers

- Old age pensions
- Unemployment benefits

It is worth noting that this report does not classify DRM support provided in the immediate aftermath of a shock as social protection (either cash or in-kind transfers). Also, social care services and active labour market policies are not among the social protection policies

studied in this research. Fee waivers and subsidies are also excluded from the definition of social assistance.

4.2 Social protection in AMS

Overall, the state of social protection in the ASEAN region can be characterised as diverse. The associated literature review for this assignment provides details on social protection sectors of all AMS (WFP and OPM 2018. Literature Review).

Building on the World Social Protection Report 2017-2019 (ILO 2017), Thailand and Viet Nam are the only AMS with social security legal coverage that is comprehensive in scope, with at least one statutory programme in each social security policy area (old age, survivors, child and family, maternity, sickness, unemployment, employment injury, disability/invalidity). The Lao PDR and Singapore statutory schemes have in place for seven social protection policy areas, excluding family and unemployment benefits, respectively. Social security in the Philippines offers protection in seven out of eight policy areas, with limited provision of unemployment benefits. Myanmar enacted its social security law in 2012, which includes provisions for most social security branches, including old age, survivors, disability, family benefits, and unemployment insurance benefit, but only certain branches have been implemented so far. The remaining ASEAN countries possess a more limited scope of legal coverage, with statutory programmes in fewer than six social security policy areas.

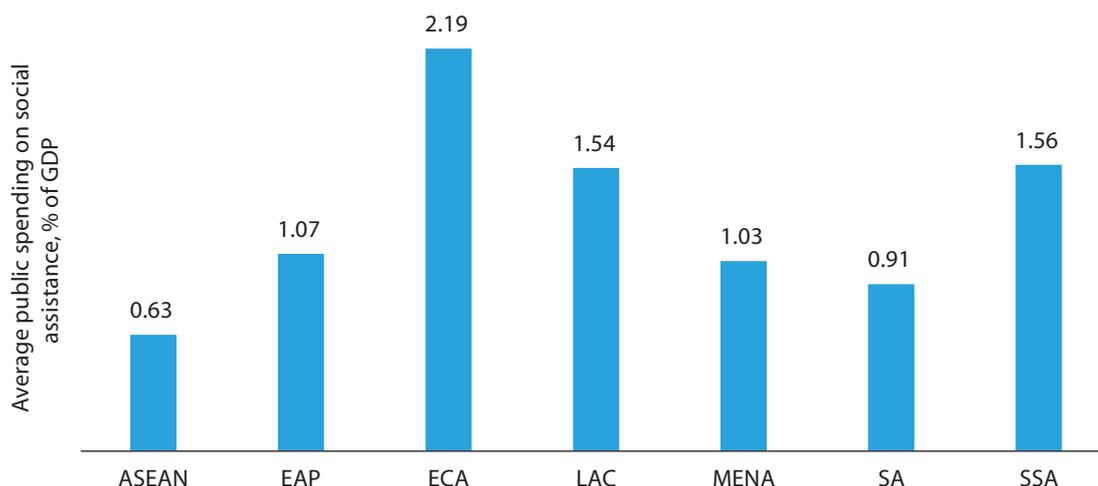
Self-employed and informal economy workers, who make up the majority in many low- and medium-income countries in the region, are usually excluded from the statutory pension system offered to formal economy employees (Ong & Peyron Bista 2015). As a consequence, non-contributory pension schemes are popular in the region. Some are means-tested (Indonesia, Malaysia, Philippines, and Viet Nam), while others are pension-tested (Thailand and Viet Nam), or universal (Brunei Darussalam). In Myanmar, a national social pension was started in 2017 and it currently covers about 32,000 individuals (or 52.5% of the population over the age of eligibility, 90 years old), according to HelpAge Pension Watch.

All AMS have committed to achieving universal healthcare through the establishment of a tax-funded healthcare system and the extension of social health insurance and have some form of school feeding programme for school-age children (ibid.).

Out of the world's regions, ASEAN spends the lowest percentage of GDP on social assistance: on average,

AMS's public spending on social assistance programmes in proportion to GDP is about 0.6%, compared to 1.07% in the East Asian and Pacific region and 0.91% in south Asian countries. Within the ASEAN region, available data show that Viet Nam spends the highest proportion of GDP on social assistance (1.02% in 2015), while Lao PDR spends the least (0.16% in 2011) (World Bank 2018b).

Figure 4: Social assistance spending (% of GDP)



Note: East Asian and Pacific (EAP), Europe and central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia (SA) and sub-Saharan Africa (SSA).

Source: ASPIRE database, latest year available. (ibid.)

4.3 Delivery systems

4.3.1 Targeting mechanisms

Social protection targeting mechanisms in the ASEAN region have been largely designed with the objective of reaching the chronic poor and therefore they have, *a priori*, limited capacity to capture the effects of sudden crises. ILO (2015) highlights that most social protection programmes use proxy means tests to predict welfare (Ong & Peyron Bista 2015). Documented evidence shows that the flagship programmes in Indonesia, Thailand, Singapore, Malaysia, and the Philippines are poverty targeted. In addition to poverty-targeted schemes, there are a number of categorical/universal programmes in the region. This includes school meals programmes in most countries, as well as social pensions in Brunei Darussalam, Thailand, and Viet Nam. There are also programmes that are geographically targeted and there are schemes that combine different types of targeting mechanisms: poverty targeting, categorical, geographical, and community-based.

The usefulness of these different targeting mechanisms in shock response will depend on the correlation between the eligibility criteria and the effects of the shock. For example, if a programme is geographically targeted, such targeting mechanism could be effective in reaching the vulnerable populations as long as the programme is implemented in a region that is actually exposed to shocks.' Furthermore, different approaches to targeting also require quite large variations to the underlying delivery systems (e.g. process for registration, enrolment of beneficiaries etc.) so this affects other practical aspects of the potential to scale-up social protection programmes in response to shocks.

The table 9 describes the implications of the different type of targeting approaches for scaling up social protection. In every case, the targeting mechanism is unlikely to lead to a full coverage of the population affected by the shock, as described in Figure 2. The use of different targeting mechanisms has different implications; for example, while programmes that use Proxy Means Test (PMT) collect and store valuable socioeconomic data, the expansion of programmes with categorical targeting is in theory easier and less costly.

Table 9: Routine approaches to eligibility verification and main implications for scaling of coverage

Routine approach to eligibility verification	Key considerations ('negative')	
	Use of existing data	Use of existing capacity and systems
Self-selection	<i>Programmes targeted via self-selection rarely collect/retain data on non-beneficiaries, and often retain very few variables on beneficiaries (existing data less relevant for shock response)</i>	Low cost and administrative complexity for scaling <i>Risks of over-demand or excessively low transfer values to counteract this</i>
Community-based targeting (CBT)	<i>Programmes targeted via CBT rarely collect/retain data on non-beneficiaries, and often retain very few variables on beneficiaries (existing data less relevant for shock response)</i>	Knowledge, relationships, and procedures retained by existing selection committees (local authorities, non-governmental organisations (NGOs), etc.) can be leveraged in the aftermath of a shock <i>Risks of political interference and discretion</i>
Proxy means test (PMT)	Socioeconomic information collected to run the PMT can be of use to swiftly support identification of a wider caseload of households Likely to collect and retain data on non-beneficiaries Targeted category ('poor') are often most vulnerable to shocks <i>Static in the context of shocks (PMT cannot predict future changes in purchasing power and transient/new poor)</i>	Capacities and procedures for data collection can be leveraged in the aftermath of a shock
Verified means testing (VMT)	Likely to collect and retain data on non-beneficiaries Targeted category ('poor') are often most vulnerable to shocks <i>Static in the context of shocks</i>	Procedures/interoperability/capacity for verified means testing can be leveraged in the aftermath of a shock <i>Risk of cumbersome process</i>
Unverified means testing (UMT)	Targeted category ('poor') are often most vulnerable to shocks <i>Static in the context of shocks</i>	Potential for simple and swift targeting in the aftermath of a shock based on existing systems <i>Higher risk of inclusion errors</i>
Categorical targeting (verification of 'status')	Targeted categories (children, the elderly, and those who are disabled or labour constrained) may be among those that are most affected by shocks <i>Categorically targeted programmes often do not collect/retain data on non-beneficiaries, and retain very few variables on beneficiaries (existing data less relevant for shock response)</i>	Low cost and administrative complexity for scaling (low data requirements: e.g. age, employment status, disability status, etc). Can piggyback on existing systems.

Note: For all approaches, caseload prioritised for routine social protection is unlikely to fully correlate to shock-affected households.

Source: Beazley and Barca (forthcoming).

4.3.2 Delivery mechanisms

In line with the global trend, electronic payment systems are increasingly being introduced in contributory and non-contributory social protection schemes in the region. However, there are still large-scale schemes that transfer benefits manually, typically through post offices.

Governments in the region increasingly recognise the need for harmonising delivery mechanisms across social protection programmes. In practice, though, there are limited examples of complete harmonisation. Where such efforts are being made, they largely relate to harmonising the delivery of social security programmes (see Box 7).

Box 7: Harmonisation of delivery points in Cambodia

In Cambodia, a Social Service Delivery Mechanism (SSDM) was adopted by the government as the implementation and coordination mechanism of the National Social Protection Strategy for the Poor and Vulnerable. The design of the SSDM was supported by the ILO and its first offices were opened in June 2014. The SSDM is an office (a 'one-stop shop') that aims to facilitate access to both social protection and employment services.

The SSDM covers five functions:

- i. It contributes to the dissemination of information on existing social protection and employment programmes available locally (health equity fund, community-based health insurance schemes, cash transfers, public works programmes, and so on).
- ii. It facilitates registration with SSDM and applications to the existing programmes through local teams using standardised procedures and tools.
- iii. It collects feedback and grievances from beneficiaries and tries to find solutions.
- iv. It creates and maintains databases of beneficiaries and service providers. The establishment of a transparent management information system will enable the monitoring of achievements, planning for the future, the evaluation of social policies, and the progressive implementation of the National Social Protection Strategy. It is not clear how this system will contribute to building a coherent system at national level, limiting overlaps (for example with the IDPoor database) and fragmentation among the multiple schemes, and so improving their efficiency.
- v. It also delivers some additional social services, such as cash transfers, and offers a hotline facility for specific vulnerable groups.

After a three-year pilot phase, the mechanism was expected to be rolled out nationally in 2016. Data on the results of the pilot are not available. The ILO is piloting a similar mechanism in Indonesia (ILO).

Source: Schmitt, Valerie 2013; Schmitt, Valérie, Ok & Van Langenhove 2015, *ibid*.

A key condition for rapid emergency response through social protection is the pre-existence of effective delivery or transfer mechanisms, either as part of regular social protection programmes or specifically built for future emergencies (McCord 2013; O'Brien, Scott, et al. 2018). Effective transfer mechanisms are complex and difficult to design and implement and involve various actors (both public and private) at different levels. It is for this reason that they need to be developed prior to the occurrence of a shock, either by adapting the transfer mechanisms of programmes with other purposes than shock response or by designing mechanisms to be scaled up during emergencies (e.g. agreements with traders in high-risk areas for voucher distribution) (Beazley, Solórzano & Sossouvi 2016).

Finally, it is important to mention that although electronic payments are usually perceived as being more efficient than manual transfers in humanitarian responses, this is not always the case (Clare O'Brien, Fidelis Hove & Gabrielle Smith 2013). Manual systems can also allow for rapid scale-up, especially if coverage is high. They may also be more resilient in face of damaged telecom and electricity infrastructure, and allow for delivery of multiple services/interventions, for instance using community level workers to deliver both payments and information or social support.

4.4 Information systems

In the ASEAN region, social protection information systems have been evolving, although there are still few countries with systems that have wide coverage.

Table 10 describes the main information systems in the region. Our literature review details the terminology relating to information systems, focusing on the four main – and overlapping – types of registries that serve the social protection sector across the globe. This includes beneficiary registries, integrated beneficiary registries, social registries, and integrated social registries.

Social protection information systems in the region are overall not risk-informed and they tend to be developed for social assistance targeting only. Programmes collect limited information to measure exposure to risks and vulnerability and they are not designed to detect or predict sudden changes to socioeconomic outcomes and tend not to provide operationally relevant information to plan and implement responses to shocks.

However, international experiences show that social protection information systems can contribute to informing shock preparedness and response. Globally, an increasing number of countries are using beneficiary

Table 10: Social protection information systems in the ASEAN

Country and data system	Type of system	Data collection approach	Individuals/households covered
Indonesia – Unified Database (UDB)	Integrated social registry	Census surveys of selected population groups Indonesia is developing an 'on-demand application' to update UDB data dynamically without using large-scale censuses	97 million individuals registered, 25 million households. 40% of population (2016)
Philippines – Listahanan	Integrated social registry	Census survey	15.3 million households. 77% of population (2016)
Malaysia – E-kasih	Integrated social registry	Collected from a poverty census Online registration also available	1.2 million individuals. 4% of population (July 2013)
Viet Nam – POSASOFT	Integrated beneficiary registry	Census survey ⁹	N/A – but small coverage since it is still a pilot
Cambodia – IDPoor	Integrated social	Census survey and community	7.9 million cumulative household records. Including 575,000 poor households (2.4 million people, about 19% of the population. ¹⁰
Thailand – Poverty Identification System	Social registry	On demand	14 million – 20% of population

Source: For Indonesia, Philippines, and Malaysia, Barca (2017); for Cambodia data collection approach, Royal Government of Cambodia (2011); for Cambodia individuals/households covered, BMZ (2017); for Thailand, WFP and OPM (2018).

data for vertical expansions or piggybacking (see Section 1.3.2). However, the use of existing non-beneficiary data has been less popular (Beazley & Barca forthcoming).

It is important to highlight that the effectiveness of this approach is partly determined by the quality of data

held within the registries or databases. If registries are outdated, exclude vulnerable populations, or include non-vulnerable populations, then their effectiveness in informing shock preparedness and response is weakened.

⁹ This refers to the data collection approach used to identify poor households by the Ministry of Labour, Invalids and Social Affairs (MOLISA). The poverty list is then used to select beneficiaries of social assistance programmes through a community-based mechanism (Giannozzi *et al.*, 2010).

¹⁰ Cambodia's database does not distinguish between data representing the current round of active holders and historical rounds. Currently, this equals to over 27 million of cumulative household member records.

CHAPTER 5

5

Shock-responsive social protection in AMS

This section describes experiences in the use of national social protection systems in response to shocks in the ASEAN region. It draws on literature review, as well as other secondary data sources. This report then discusses factors that enable social protection systems to be shock-responsive.

5.1 Experiences of shock-responsive social protection in AMS

There are only a handful of documented experiences in the use of social protection to respond to shocks in the ASEAN region. It is important to clarify that this

study is limited to the experiences that have been documented in English and that are publicly available, and hence there may exist experiences that are not captured in this report. In the sections below this report presents the experiences organised by type of social protection scheme: social assistance, social security, and employment-based programmes.

Before moving on to the response experiences in the ASEAN region, Box 8 describes some experiences of carrying out ‘design tweaks’ to existing social protection programmes, enabling them to adjust and respond to shocks. At the end of the section, Box 9 presents the gender implications in shock-responsive social protection.

Box 8: Experiences of ‘design tweaks’ to social protection schemes

In the **Philippines**, the protocols of the Pantawid CCT include a provision that suspends conditionalities for a limited period of time when a ‘state of calamity’ is declared (Bowen, 2015). Along the same lines, the NCDDP includes a contingency component to adjust and simplify procedures in the case of disasters. For example, the contingent component allows for certain types of projects and activities that are otherwise not permitted under regular NCDDP rules, in order to ‘better address the recovery needs of communities’. Additionally, basic operational procedures are modified to speed up implementation (Bowen 2015).

In **Indonesia**, the flagship community-based poverty alleviation programme, the National Program for Community Empowerment Mandiri (PNPM Mandiri), uses a community-driven development approach, providing direct block grants of about US\$20,000, financing small-scale socioeconomic infrastructure, education and health activities, and microloans for women’s savings groups. Following the Asian tsunami in 2004, PNPM developed a comprehensive set of operational procedures to expedite and support disaster recovery, which are essentially modifications to the programme’s existing operations manual, speeding up planning and expanding the menu of possible activities to be implemented with community grants to account for special needs in emergency situations (Jha & Stanton-Geddes 2013).

In **Thailand**, the Social Security Act B.E. 2558 establishes a protocol to reduce employee and employer contributions and to extend the duration of unemployment benefits during emergencies (vertical expansions). Both strategies were used in response to the 2011 Mega Flood and the global economic crises of 2008/09 (WFP and OPM (2018). Thailand Case Study).

5.1.1 Social assistance

There are only a few experiences in the region of the use of cash or in-kind social assistance programmes in response to shocks. Most experiences identified in this review, however, are of responses to economic shocks. The use of these schemes to respond to natural shocks is still rare, albeit with the notable and frequently cited case of the Pantawid CCT in Philippines (see Box 9).

Vertical expansions of existing programmes, by increasing the duration and/or value of benefits, represent a type of response that is in theory easier to achieve than horizontal expansions, which entail increasing programme coverage, registering new beneficiaries, etc. There are some notable examples of where this has been done in response to economic shocks. For instance, in Indonesia the fuel subsidy reform led to the introduction of several CCTs and

unconditional cash transfers (UCTs), which were subsequently adapted in times of crisis. In response to the fuel price crisis in 2013, PKH and the scholarship programme (BSM) were expanded and benefit levels increased (both horizontal and vertical expansions) (Harapak, 2018).

In the case of in-kind vertical expansions, school meals programmes present the advantage of having fairly wide coverage and in-built systems for delivery. Cambodia, Lao PDR, and Malaysia have all provided additional resources to school meals programmes in response to the food price crisis and the global financial crisis in 2008/09 (ASEAN 2010).

Box 9: Vertical expansion of Philippines's Pantawid CCT

In 2013 Typhoon Haiyan devastated the central Philippines, causing storm surges, flooding, landslides, and severe human and economic consequences. Nearly 6,300 people died and a further 4.1 million people were displaced. The storm affected nine provinces, including some of the country's poorest regions, and it was projected to increase the national poverty incidence by 1.9 percentage points (Bowen 2015).

In response to Haiyan, WFP piloted an emergency cash transfer project that targeted over 105,000 Pantawid beneficiary households in typhoon-affected areas.¹¹ WFP's approach was to vertically expand the Pantawid CCT programme, by providing top-ups to its regular assistance between December 2013 and March 2014, immediately after the typhoon. The top-up value was around US\$30 per month for two months, plus 50 kg of rice in some areas. During the recovery phase, UNICEF delivered unconditional cash assistance to support the economic recovery of families with children, prioritising structurally vulnerable households. This was also a vertical expansion of Pantawid, but it was different in size, scope, and objectives to WFP's transfer. UNICEF provided cash to fewer households (5,801) but delivered US\$100 per month for six months between mid-2014 and early 2015.

Overall, the evidence available shows that scaling up Pantawid through the emergency cash transfer presented an efficient channel for emergency assistance to a cohort of those affected, without impacting negatively on the channels that were still necessary to reach the wider population. Challenges mostly stemmed from a lack of prior experience and preparedness.

Source: Smith et al. (2017)

Horizontal expansions and the launch of new programmes were some of the strategies used to respond to the global financial crisis of 2008/09 and the food and fuel crises that preceded it. These expansions have significantly increased the role of cash transfers within the social protection policy mix in many AMS (ASEAN, 2010). In the Philippines, the Pantawid CCT was expanded to mitigate the negative impact of the food and fuel crisis in 2008. In Malaysia, the Social Safety Net, or Jaringan Keselamatan Sosial Malaysia, was relaunched in February 2009, as part of the country's first stimulus package, with expanded eligibility for financial assistance, more than doubling the number of beneficiaries and budget allocation (ASEAN, 2010).

The existing evidence suggests that a majority of social protection responses to shocks involve either vertical or horizontal expansions of existing social protection programmes. In contrast, instances of piggybacking are rare. One example is Indonesia: the Government of Indonesia initiated a UCT programme

(the BLT – Bantuan Langsung Tunai) to offset the negative impact on the poor resulting from the fuel price increase in 2005. In 2008, the government redeployed BLT to mitigate the effects of a new rise in gasoline and kerosene prices. The 2008 BLT targeted the same number of people as the 2005 BLT and used the same baseline data, with some adjustments through a verification process (Harapak, 2018).

Another example is Viet Nam, where the existing (largely geographically targeted) anti-poverty programmes were not adjusted and expanded in response to the global financial crisis. Instead of adjusting existing programmes to take account of the effects of the crisis, the government introduced a series of new programmes in the stimulus package adopted around the Tet New Year in February 2009. These included a one-off targeted cash transfer during the Tet New Year holiday consisting of VND 200,000 per poor person, up to VND 1,000,000 per poor household, based on the Ministry of Labour, Invalids and Social Affairs (MOLISA) 'poor list',

¹¹ The Pantawid Pamilya Pilipino Program is a nationwide CCT aimed at poverty alleviation and improving the health, nutrition and education of poor children.

which allowed for the rapid identification of beneficiaries eligible to receive the cash transfer (Ye & Bodewig 2009).

5.1.2 Social insurance

Social insurance is, by design, an automatic stabiliser following a shock. As with social assistance, social insurance has been used more frequently in the region to respond to economic shocks than to natural disasters.

The following vertical expansions have been identified in response to the global financial crisis of 2008/09:

- In Thailand, unemployment insurance was extended from six to eight months for formal sector employees under the Social Security Fund scheme and contribution rates were temporarily reduced (WFP and OPM 2018. Thailand Case Study).
- In Malaysia, there was a reduction in the Employees Provident Fund's employee contributions for workers from 11% to 8%, from February 2009 to the end of 2010 (ASEAN, 2010).
- In Singapore, cash supplements were provided to a range of vulnerable groups in response to the crisis, including a doubling of goods and services tax credit focused on the elderly and low-income households, as well as additional workfare income supplements for low-wage workers (ASEAN, 2010).
- In Viet Nam, the Government of Viet Nam approved a 15% increase in pensions starting in October 2008 (Binh, 2010).

It is less frequent for social insurance schemes to expand in response to natural shocks. This report has identified the following vertical expansions in such cases:

- The social security scheme of the Philippines made a significant contribution to the social protection response to Typhoon Haiyan, providing assistance to eligible affected households. The scheme made several disaster relief instruments available to its members, including advanced release of pensions, preferential terms for salary loans, and easier house repair loan terms (Bowen 2015).
- In Thailand, in response to the 2011 floods, the duration of unemployment benefit claims was extended from 30 to 60 days for unemployed people during September to November 2010. In addition, the government approved a contribution reduction for employers and employees from 5% to

3% to June 2012 and from 5% to 4% to December 2012 (Preechachard 2016).

Due to the contributory nature of social insurance schemes, it is less common to see governments expanding these schemes horizontally. However, it is worth mentioning that during the 2008/09 economic crisis the Government of Viet Nam implemented several measures to facilitate social insurance participation, including relaxing participation requirements and providing direct support as firms and workers faced difficulties in complying with social insurance contributions. It also accelerated a planned reform to introduce an unemployment insurance scheme (Binh 2010).

5.1.3 Employment-related social protection

Global evidence shows that employment-based schemes are sometimes used to respond to emergencies, either by setting up new schemes or by expanding existing ones (OPM, 2017; Beazley et al., 2016). There are some experiences of ASEAN countries using such schemes in response to natural shocks:

- In the Philippines, in response to Typhoon Haiyan, the government extended the working days of the cash-for-work programmes from a 10-day ceiling to 15 days. It also increased the wage to 100% of the prevailing minimum wage (previously set at 75%) (Bowen 2015).
- In the Philippines, the Department of Labour and Employment (DOLE) Integrated Livelihood and Emergency Employment Programme (DILEEP) was initiated in 2009 in response to the global economic crisis. It aims to restore livelihoods and provide immediate social protection to vulnerable, unemployed, underemployed, and displaced workers, and survivors of calamities. This is done by providing short-term employment in infrastructure and non-infrastructure projects. DILEEP also assists self-employed people by facilitating their access to credit and training. In the aftermath of Typhoon Haiyan, DILEEP was swiftly put into place by DOLE in cooperation with the Department of Social Welfare and Development, other government agencies, and the ILO (Satumba 2016).
- In Indonesia, following the 2010 eruption of Mount Merapi, PNPM provided emergency assistance to affected communities in the form of livelihood projects and a cash-for-work programme (Sagala, Yamin, Pratama & Rianawati 2014).

In response to the 2008 global financial crisis, a number of stimulus packages were implemented in Indonesia, the Philippines, Viet Nam, and Thailand (ASEAN, 2010). These included significant allocations to small infrastructure programmes, which in many cases consisted of community-based approaches to create temporary employment opportunities and livelihood support. As an example, the Emergency Food Assistance Project, initiated in 2008 in Cambodia with the support of development partners, had food- and cash-for-work components linked to rehabilitation works on roads and canals (Ong & Peyron Bista 2015). In addition, in Viet Nam, job creation was supported by the National Job Creation Fund, through loans to informal sector and family businesses, creating 250,000 new jobs in 2009, according to MOLISA (Binh, 2010). The other employment-related support provided during the global financial crisis consisted of training, which was the case in Singapore, Malaysia, Thailand, Cambodia, and Lao PDR (ASEAN, 2010).

5.1.4 Gender in shock responsive social protection

Globally, the coverage of social protection has increased across Asia and Africa. However, gender-based discrepancies continue to persist. An analysis of social protection coverage and expenditure for the Asia Pacific region found that overall, women receive fewer benefits, have less coverage and benefit from a lower allocation of public expenditure on social protection compared to men (ILO 2017). For example, public expenditure in the Asia Pacific region for social protection for women is less than 1.2 per cent of GDP while for men it is around 1.6 per cent of GDP (ILO 2017).

There is a significant lack of documented evidence on gender-based or gender-sensitive programming in shock-responsive social protection, particularly for the ASEAN region. While many social protection programmes are targeted at women by design – for

Box 10: Gender in shock-responsive social protection

The literature review conducted for this research has uncovered some evidence of the gendered impacts of covariate shocks in AMS, mainly in Viet Nam (Bastagli & Holmes 2014) and the Philippines (Philippine Statistics Authority 2014; Valerio 2014; Nguyen 2018; Rebecca Holmes, Maria Libertad Dometita & Julie Lawson McDowell 2018). Below, this report summarises some overarching implications for shock-responsive social protection, which will require further research and a more operational focus:

- Planning and preparedness activities need to consider key gender issues and statistics to understand the needs of men and women in a crisis and that vulnerabilities and coping strategies vary by gender. Indeed, the different needs, opportunities, and risks facing women and men are important elements when defining vulnerability and have implications for the emergency response, recovery, and long-term development of a given region or country. This points to the need for sharing data and knowledge between humanitarian and social protection actors.
- If a gendered social protection approach is already in place in an existing social protection programme then adapting the design or implementation features of that programme to respond to the crisis would have gender-responsive features. If this is not the case, the use of elements of existing social protection programmes will require changes to reflect the needs of the new target group.
- The design of social assistance programmes should include undertaking a culturally sensitive gender analysis. For example, a gender analysis should be undertaken to identify productive activities that can be undertaken by women participating in cash-for-work programmes.
- Data collection for both programming and monitoring should include women's perspectives and be conducted in a gender-sensitive manner. For example, separate consultation with women and men may be necessary to get a reliable picture of the gender-based division of livelihood activities. This means that the programme needs gender-disaggregated data on livelihoods, needs, and responsibilities.
- The definition of 'work' could potentially be extended to care work to be more inclusive toward women. However, this requires a change in mindset to recognise the monetary value of care work. Community sensitisation and information campaigns are needed to ensure acceptability.
- Programmes that require collection of cash or other valuable items should consider the potential threat to women safety as the increased difficulties of women because of increased burden of care work or pregnancy/nursing, especially given the crisis context as well. The possibility of delegating a representative should be considered.
- Gender information collected in the monitoring and evaluation systems of social protection programmes could be used for targeting during a crisis.
- The institutions making decisions related to DRM policy and legislation are overall male dominated in ASEAN. Often, women are seen as vulnerable 'victims' rather than as active change agents. Women's empowerment programmes could be usefully employed in post-crisis situations.

example, maternal cash transfers – there is often less explicit focus on incorporating gender sensitivity in implementation or assessing differential impact by gender. It should also be noted that gender imbalances in socioeconomic outcomes are not always in favour of men. In some ASEAN countries, for example, education attainment rates are lower for boys than girls (UNESCO 2017). Gender differences are also exacerbated by other factors such as location and ethnicity.

It is expected that covariate shocks such as natural disasters affect men and women differently owing to different roles and responsibilities in their communities (Trohanis, Svetlosakova & Carlsson-Rex 2012). Existing gender imbalances, such as control over resources, may also be exacerbated in the aftermath of shocks. Box 10 highlights some implications of this for shock responsive social protection.

5.2 Enabling and constraining factors for shock-responsive social protection systems

In this section this report presents the enabling and constraining factors for risk-informed and shock-responsive social protection systems in the ASEAN region. This report describes here the overall regional trends, albeit with the caveat that there are substantial variations within the region. Table 11 below provides a summary of this discussion.

It is important to highlight that there are two overarching enabling factors for shock-responsive social protection. The first one is related to the interest and commitment of the ASEAN Secretariat, the AMS, and

Table 11: Factors affecting shock-responsive social protection in ASEAN

Social Protection Systems	Enabling factors	Constraining factors
 <p>Coordination</p>	<ul style="list-style-type: none"> ● Most AMS have DRM frameworks, laws, or plans ● Strong cooperation and collaboration among AMS, in particular through the ASEAN Secretariat ● Many countries give social protection a role in support to people affected by disasters 	<ul style="list-style-type: none"> ● Limited implementation and enforcement of DRM legislation; limited mainstreaming of DRM ● Social protection, especially social assistance, still a developing sector in the region ● Limited coordination and interaction between DRM and social protection sectors
 <p>Delivery</p>	<ul style="list-style-type: none"> ● High levels of mobile network coverage and access to formal banking (in selected AMS) ● Systems for transferring cash electronically are already in place in selected AMS 	<ul style="list-style-type: none"> ● Some reluctance in regard to direct cash transfers to beneficiaries ● Limited flexibility of delivery systems ● Social protection targeting mechanisms largely designed with objectives different from capturing the effects of sudden crises
 <p>Information systems</p>	<ul style="list-style-type: none"> ● Ongoing development of social protection information systems ● Most countries have Early Warning Systems (EWS) in place 	<ul style="list-style-type: none"> ● Limited data integration in the social sector and beyond ● Beneficiary registries are not risk informed ● No link to pre-defined social protection triggers
 <p>Financing</p>	<ul style="list-style-type: none"> ● Most AMS have budget provisions for DRM activities 	<ul style="list-style-type: none"> ● No predefined commitments to channel resources to the poor and vulnerable through social protection programmes after a shock ● Existing public financial management procedures can be cumbersome in some countries ● Lack of predictable, protected, and layered funding sources

Source: Authors

development partners/donors in developing risk-informed and shock-responsive social protection systems. The second one refers to the experience of the Philippines in the use of social protection to respond to recent disasters (see Section 5.1). This is one of the key experiences in the ASEAN region, often cited by the literature and which has provided valuable insights about this new policy area. It therefore provides an opportunity for peer learning for AMS.

5.2.1 Coordination and institutional capacity



Enabling factors

- Our review of DRM policies in the region presented in Section 3 shows that most countries have DRM policies in place. This is an enabling factor from which to embed DRM in social protection policies and systems and from which to design holistic strategies that could include the social protection sector.
- There is strong cooperation and collaboration among AMS, in particular through the ASEAN Secretariat. The Secretariat provides a platform for promoting coordination, knowledge sharing, and developing common frameworks and approaches. The ongoing development of the ASEAN guidelines on disaster-responsive social protection, championed by the ASEAN Secretariat, is a clear example of the opportunity that these regional bodies can offer.
- Many countries in the region give social protection a role in providing support to people affected by disasters. This is the case in the Philippines, Thailand, Viet Nam, Malaysia, Cambodia, and Myanmar. The extent to which this function is effectively performed varies from country to country, but at least the fact that social protection has the mandate to provide assistance to people affected by shocks is an enabling factor on which to build.

Constraining factors

- Despite the existence of DRM policies in most AMS, there is limited implementation and enforcement of DRM legislation and with mainstreaming DRM (see

Section 3.4). This is partly a result of lack of clarity on mandates between institutions. Also, while other sector plans may include DRM, its inclusion in sectoral programming and budgeting is rare. Furthermore, DRM activities in many low- and middle-income AMS are still focused on emergency response rather than preparedness.

- Overall, social protection, especially social assistance, is still a developing sector in the region, despite the different country variations (see Section 4.2). While social security covers large proportions of workers in the formal sector, coverage for informal sector workers remains low. This is particularly challenging for low- and middle-income countries where social security schemes are contributory and thus exclude large numbers of poor, working-age people in the informal sector. At the same time, coverage and spending on social assistance is lower than in other regions of the world.
- DRM and social protection are sectors that have been designed for different purposes and in most of the countries they have limited coordination and interaction, despite administrative structures with joint representation. In a few countries, however, such as the Philippines, Lao PDR, Myanmar, and Malaysia, the mandates for DRM and social protection lie within the same department, which provides greater opportunities for coordination and integration. This not the case in the rest of the region.

5.2.2 Delivery systems



Enabling factors

- Electronic payment systems are increasingly being introduced in contributory and non-contributory social protection schemes in the region (see Section 4). These systems can enable cash to be transferred quickly after a shock, unless they are disrupted or affected by the shock. However, there are still large-scale schemes that transfer benefits manually (Indonesia, Viet Nam, and Myanmar). It is important to mention that global experience shows that the lack of electronic payment systems does not impede the use of cash-based social protection programmes during crises; there are a number of experiences of countries providing cash support

with manual payment systems (Beazley, Solórzano & Barca forthcoming; OPM 2017).

- AMS have high levels of mobile network coverage and access to formal banking is high in the upper-middle- and high-income countries. Encouragingly there is little gender gap in account ownership and account penetration among the poorest 40% of households is 38% (based on 2014 Global Findex data) (Martinez 2016). This provides valuable infrastructure to innovate in delivery mechanisms for social transfers.

Constraining factors

- Social protection targeting mechanisms have been largely designed with objectives different from capturing the effects of sudden crises. Although this is categorised as a constraining factor, countries within the region (e.g. the Philippines) and outside the region (see OPM, 2017) have responded to shocks through systems and programmes that had not been designed for that purpose. Consequently, this is a constraining factor that suggests that social protection systems may need to be adapted, but it is not a factor that impedes this role.
- Flagship programmes in countries such as Indonesia, Thailand, Singapore, Malaysia, and the Philippines are poverty targeted. Others rely on universal and/or geographical targeting. The effectiveness of vertically expanding these types of programmes in response to shocks will depend on the correlation between the eligibility criteria and its implementation and the effect of the shock and the policy priorities. For example, the vertical expansion of the poverty-targeted schemes assumes that the poor are affected by the shock at a scale that requires support.
- In a few ASEAN countries, there continues to be a reluctance to use direct cash transfers to beneficiaries, both for emergency response as well as social assistance (WFP and OPM 2018, Lao PDR Case Studies). For the latter, in some countries cash transfers are deemed more appropriate in instances of categorical vulnerability – disability, old age, or pregnancy. Policymakers prefer the working-age poor to be provided with livelihood-related support such as skills training and agriculture inputs. This is not necessarily a strong limitation as in-kind transfers provided through social protection programmes can also be scaled in response to disasters. Nevertheless, global evidence

does point to the benefits of cash in terms of ease of logistics, fungibility, and providing choice to recipients (Arnold, Conway & Greenslade 2011; Michelson et al. 2012; Merttens et al. 2013; Gordon 2015).

5.2.3 Information systems



Enabling factors

- The ongoing development of social protection information systems in the region is promising (see Table 10). These systems could be adapted to provide useful data for shock preparedness and response.
- Most countries have EWS in place, which could potentially be used to inform or trigger social protection responses (see Section 3.2.1). However, there are no experiences in the region of EWS being used to trigger social protection responses.

Constraining factors

- There are overall limited levels of data integration in the social sector and beyond. Data-sharing agreements and protocols within the social protection sector and beyond are still rare in the region. In Thailand, for example, the government is implementing the Big Data Project, which aims to coordinate and integrate government data, including social protection data. This is a nascent project, which emerged in response to high levels of fragmentation in terms of data collection, management, and use, and very limited data sharing within government (WFP and OPM 2018. Thailand Case Study).
- Beneficiary registries and other types of social protection registries in the region are not risk-informed and they tend to be developed for social assistance targeting only. Programmes collect limited information to measure exposure to risks and vulnerability.
- Existing EWS have no pre-defined triggers to initiate responses specific to social protection programmes.

5.2.4 Financing mechanisms



Enabling factors

- Most AMS have budget provisions for DRM activities, although funding adequacy varies from country to country (see Section 3).

Constraining factors

- There are no pre-defined commitments among AMS to channel resources to the poor and vulnerable through social protection programmes after a shock. The use of social protection

programmes to respond to shocks is a new policy area in the region and governments have not developed financial procedures and commitments to provide funding for this type of response.

- Existing public financial management procedures can be cumbersome or rigid in some countries in the region. This is the case in Thailand and Lao PDR, for example (WFP and OPM (2018) Thailand and Lao PDR Case Studies). Cumbersome and rigid procedures can impede rapid scale-ups of social protection schemes.
- Disaster risk financing relies on (*ex-ante*) budget allocations and (*ex post*) budget reallocations and, in some countries, on humanitarian assistance. However, release of funds is often inadequate and delayed. Also, there is a lack of predictable, protected, and layered funding sources in the ASEAN region (see Section 3.3).

CHAPTER 6

6

Recommendations

This section provides broad policy recommendations for three key actors: AMS, the ASEAN Secretariat, and partners.

These recommendations are based on the analysis presented in the previous sections, on the case studies conducted in Thailand (WFP and OPM 2018) and Lao PDR (WFP and OPM 2018), on a literature review of experiences of shock-responsive social protection in the region (WFP and OPM 2018 Literature Review), and reports of the in-depth case studies conducted by FEG in Cambodia, the Philippines, Myanmar, and Viet Nam as part of the UN joint project FAO (forthcoming) and Government of Myanmar and UNICEF (forthcoming). When possible, this report also draws on the global evidence to inform the recommendations. It is important to mention that the recommendations presented below are broad policy recommendations for the whole ASEAN region, and that each country and actor will have to assess which of them are suitable for their contexts and policy objectives.

Recommendations for AMS

Coordination and Capacity



- 1. Continue investing in the development of social protection systems for their regular mandates (not necessarily shock response).** Global evidence shows that stronger social protection systems, with robust administrative capacity, high coverage, and provision of adequate support, offer more opportunities for shock response (Beazley, Solórzano & Barca forthcoming; O'Brien, Scott, et al. 2018).
- 2. Conduct diagnostics and feasibility assessments to assess whether it is appropriate to use social protection systems to respond to covariate shocks.** Social protection programmes are useful for shock response only if they offer a solution that improves on alternatives (O'Brien, Holmes, Scott & Barca 2018). OPM's toolkit on shock-responsive social protection proposes six dimensions for assessing whether shock-responsive social protection is appropriate: meeting needs, coverage, timeliness, predictability, duplication, and sustainability (ibid.). The toolkit highlights that it is unlikely that any shock-responsive programme will improve all these dimensions compared to an alternative emergency response; it is likely that this decision will entail a policy trade-off regarding what dimensions to prioritise given the country context and the policy priorities. Consequently, this report recommends avoiding taking for granted that social protection should play a role in shock response and to conduct diagnostics and feasibility assessments and address the policy trade-offs before embarking on the process of making the social protection systems more responsive.
- 3. Nascent social protection systems should not be overburdened.** The role of these systems in shock response presents a policy trade-off. On the one hand, systems/programmes that are still developing present the opportunity of tailoring their design from the early stages onwards to make them more risk-informed and responsive. On the other hand, asking systems/programmes that still do not manage to achieve their core objectives to respond to large-scale shocks could have negative effects on their regular operations, the emergency response, and even on the reputation of the system/programme. One of the key principles underpinning the development of the ASEAN Guidelines for Disaster-Responsive Social Protection is to 'do no harm', which here means to ensure that new initiatives do not damage the operations of existing programmes (ASEAN Secretariat 2018). With these recommendations in mind, if the intention of the AMS is to use social protection to respond to shocks, then:
- 4. Consider first developing a coherent strategy establishing how to respond through social protection.** This strategy should be part of an integral DRM strategy and aligned with any existing strategy on social protection. Furthermore, there should be consensus among stakeholders in government on the action plan and financing of

this strategy. In many AMS, such strategies will be ineffective unless backed by appropriate legislation (such as government decrees).

Delivery Systems



5. If horizontal expansions (or piggybacking) are envisaged, the delivery mechanisms would need to be adapted for managing additional caseloads. This could include protocols for increasing coverage, transfer values, and frequency, defining operational and transaction costs, requirements and processes for enrolling new beneficiaries, and even pre-printing temporary programme identity cards. Likewise, the Information Technology platform behind the delivery mechanism needs to be ready to operationalise these special protocols. The adaptation of the delivery systems would entail assessing which mechanisms could be scaled up quickly (e.g. transfers to bank accounts, disbursing e-vouchers, etc.) and setting up such mechanisms (e.g. ensuring that data collection instruments collect bank account details). Stand-by agreements with service providers may also be required.

Information Systems



6. **Consider adapting social protection information systems (social registries or beneficiary registries) so that they can provide information on vulnerability, exposure to shocks, and operationally relevant data for planning and responses.** This could imply in some cases simply adding some questions to existing forms or questionnaires. Considering the differential impact of shocks by gender, these information systems should ideally collect disaggregated data.
7. **Horizontal expansions require data on non-beneficiaries** (see Figure 2). This type of data can be gathered in the following ways:
 - Through increased interoperability and data sharing across existing databases. However, integration of social protection data in the region is limited (see Section 4). This is an area of investment for regular social protection programming as well as for shock responsiveness.
 - Through social registries, which contain data on both beneficiaries and non-beneficiaries. However, there are still few countries in the region that currently have this capacity (see Section 5.2.2).
 - Through the pre-registration and enrolment of households for an eventual scale-up. The case of the Hunger Safety Net Programme in Kenya is often cited in the literature as an example. To our knowledge, there are, however, no other experiences of this kind.¹² It is a policy choice that requires strong commitment and careful analysis in relation to its cost-effectiveness.
 - Through *ex post* data collection. All the options above have a core constraint: since data is captured before the shock, it cannot reflect the situation of households after the shock. *Ex post* data collection through post-disaster needs assessments or other methodologies could solve this problem, but the timeliness of the response based on *ex post* data will depend on the capacity to conduct such assessments (speed and accuracy).
 - Through the use of programme data on former beneficiaries or eligible households not covered due to quotas or budget restrictions.

8. **As important as investing in the availability of data is investing in its quality.** There are five dimensions of data quality to consider: completeness, relevance, currency, accessibility, and accuracy (Barca & O'Brien 2017). In practice, this implies conducting regular updates of registries through surveys or allowing for self-reporting with some form of external validation.
9. **The extent to which existing EWS data could be used as triggers requires further research.** This is an area that could be explored by governments. Although EWS triggering social protection responses (automatically or not) is in principle a good idea, it is important to take into account that it requires very strong commitment from governments and that it may be feasible for certain types of disasters only. Global reviews suggest that

¹² This programme collected additional data that enabled expanding horizontally in response to shocks. In fact, it went beyond collecting additional data and pre-enrolled almost all the households in the four participating counties, and gave them bank accounts as well, despite nearly 300,000 being ineligible for the routine transfers. In this regard, the programme was intentionally designed and prepared to scale up (O'Brien *et al.*, 2018).

the only countries with this type of system in place are Kenya, Uganda, and Ethiopia, and in all of them social protection scale-ups are triggered in response to droughts (Beazley and Barca forthcoming).

Financing Mechanism



10. Any strategic plans relating to shock-responsive social protection must be costed first. This will allow policymakers to assess potential synergies across programmes and efficiency savings through the pooling of resources.
11. Consider developing protocols and commitments for channelling support through social protection programmes based on the shock-responsive social protection strategy.
12. Beyond social protection, consider layering risks through different financing instruments. This means introducing instruments that finance responses for differing scales of shock.
13. Support disaster financing and public financial management reform to ensure timely response to both 'large-scale' emergencies (which can access state-level funds) and small, recurrent disasters (which are financed locally).

Responses

For the development of a shock-responsive social protection strategy, it is recommended to identify opportunities along the system and capitalise on low-hanging fruit. This is very context specific, but some aspects to take into account are the following:

14. Vertical expansions are in theory administratively easier to implement because they do not entail providing support to new beneficiaries.
 - a. However, global evidence suggests that preparedness is essential for a timely vertical expansion; experiences outside the ASEAN region show that without adequate planning and preparedness, the decision-making process behind vertical expansions and the availability of funding can delay the response a few months (ibid.).
 - b. Vertical expansions exclude those affected by the shock who are not beneficiaries of the social protection scheme expanded. As a

consequence, governments will need to be assisted with complementary interventions.

- c. The effectiveness of vertically expanding these types of programmes in response to shocks will depend on the correlation between 1) the eligibility criteria and their implementation and 2) the effect of the shock and the policy priorities. The following example helps in illustrating this point: if a programme operates in a region that has not been affected by the shock, then there is obviously no point in expanding it vertically in response to such a shock.
- d. When planning vertical (and horizontal) expansions it is important to assess the adequacy of the type and value of the transfers. Cash transfers, for example, require functioning markets.
- e. In order to increase the coverage of the response, governments can consider expanding vertically more than one programme at the same time, as in the case of Fiji in the aftermath of Cyclone Winston (WFP 2017).
15. Horizontal expansions are in theory more complex because they entail increasing a programme's caseload, which can have substantial administrative implications:
 - f. Although planning and preparedness is always important, it is more so in the case of horizontal expansions. Delivery systems would need to be adapted in order to scale up.
 - g. It is important to keep in mind that there are very few experiences of social protection programmes expanding horizontally in response to disasters in the developing world and none in the ASEAN region (WFP and OPM 2018. Literature Review; OPM 2017). This shows that this is a challenging policy choice.
 - h. Effective communication to beneficiaries and the wider population about the temporary nature of the expansion is essential.
16. Piggybacking has the advantage that governments can pick the administrative process or system that is more adequate for the response. This could imply relying on a registry or database, on the payment mechanism, or on the personnel of a social protection programme, for example.
 - i. One of the advantages of this approach is that even programmes or systems that are not robust enough to expand can have administrative capacities that could be used for shock response.
17. Vertical and horizontal expansions, piggybacking, design tweaks, and alignment can be combined or

sequenced. These responses are not mutually exclusive.

Recommendations to the ASEAN Secretariat

1. Continue to facilitate cooperation and coordination amongst AMS through meetings, workshops and exchange programmes.
2. Promote a vision which emphasises the importance of: i) understanding disaster risk and social protection being risk-informed, ii) developing integrated solutions to shocks; iii) developing flexible systems, and iv) developing adequate financing strategies.
3. Provide technical assistance on capacity building through AHA, particularly in areas of risk modelling, policy planning and budgeting. Create linkages between AHA and local organisations to build their capacity.
4. Use regional platform to facilitate peer learning and knowledge dissemination. Activities such as publications, joint-workshops and webinars can be used to share best practice, challenges and achievements.
5. Promote the importance of assessing and evaluating experiences on shock-responsive social protection in the region in order to strengthen the body of evidence and improve future policies and programmes.
6. Facilitate research on specific issues such as: i) the impact of covariate shocks on women and children and child and gender sensitive programming in social protection, ii) methodologies for assessing vulnerability to disasters and shocks, iii) the effectiveness of EWS and their potential use for triggering support.
7. Facilitate further interaction between social protection and DRM sectors through concrete initiatives such as joint planning and budgeting exercises, workshops and policy coordination. Technical assistance could also be structured so it enables linkages and helps reduce sectoral silos.
8. Support the development of regional insurance facilities through connecting public and private sector stakeholders and facilitating technical assistance.

Recommendations for development partners

The recommendations for partners such as donor agencies are similar in nature the recommendations for ASEAN Secretariat. In addition to providing financial resources, partners have different areas of expertise which could be used to provide technical assistance to governments. Some specific areas include:

1. Conducting diagnostics and feasibility assessments for shock-responsive social protection programming.
2. Financing and providing technical support to piloting shock-responsive social protection programmes.
3. Providing technical assistance to improve coverage and effectiveness of social protection and DRM systems and supporting government contingency planning efforts.
4. Developing agreements with governments for channelling emergency support through social protection, if feasible.
5. Building government capacity by facilitating social protection and emergency response instead of direct provision. This may not be applicable in certain contexts such as conflict where service provision through NGOs may be necessary.
6. Promoting an evidence-based debate on the use of cash in shock responses in countries hesitant to move to this approach.
7. Facilitate South-South learning in the Asia-Pacific region through sharing lessons learnt from SRSP experiences in Indonesia, Nepal, Sri Lanka and Fiji.
8. Providing support in household assessment tools in order to ensure adequate information is collected to be able to inform horizontal expansion approaches and risk-informed social protection strategies.
9. Pilot-test an initiative to link horizontal and/or vertical expansions to EWS.

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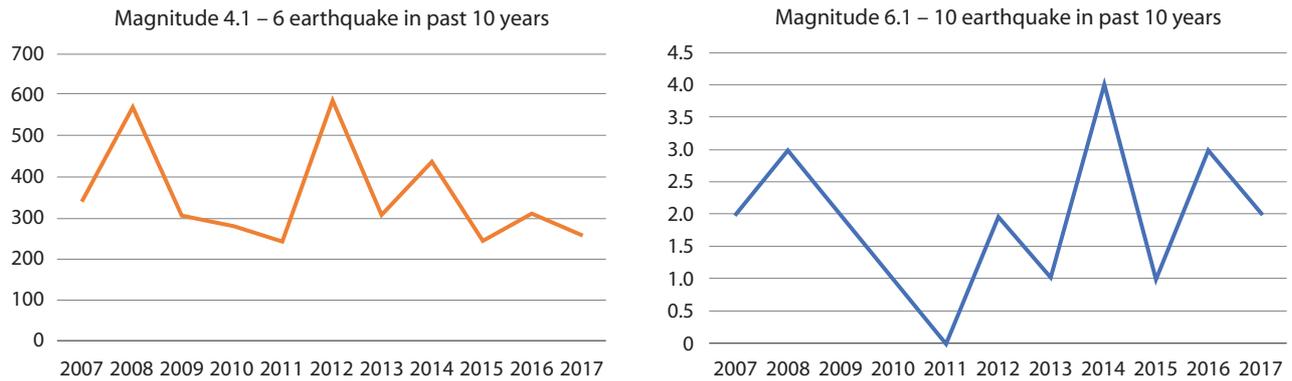
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Annex A: AMS risk data

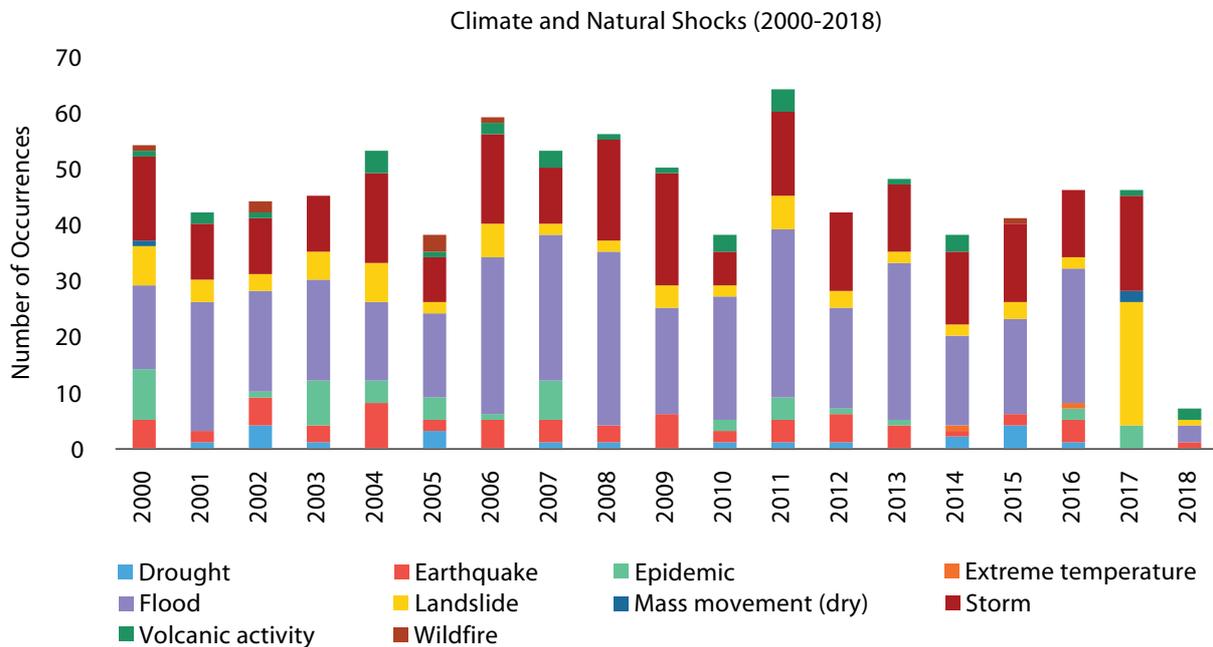
A.1 Shocks and vulnerability

Figure 5: Earthquake occurrences in the region (2007-2017)



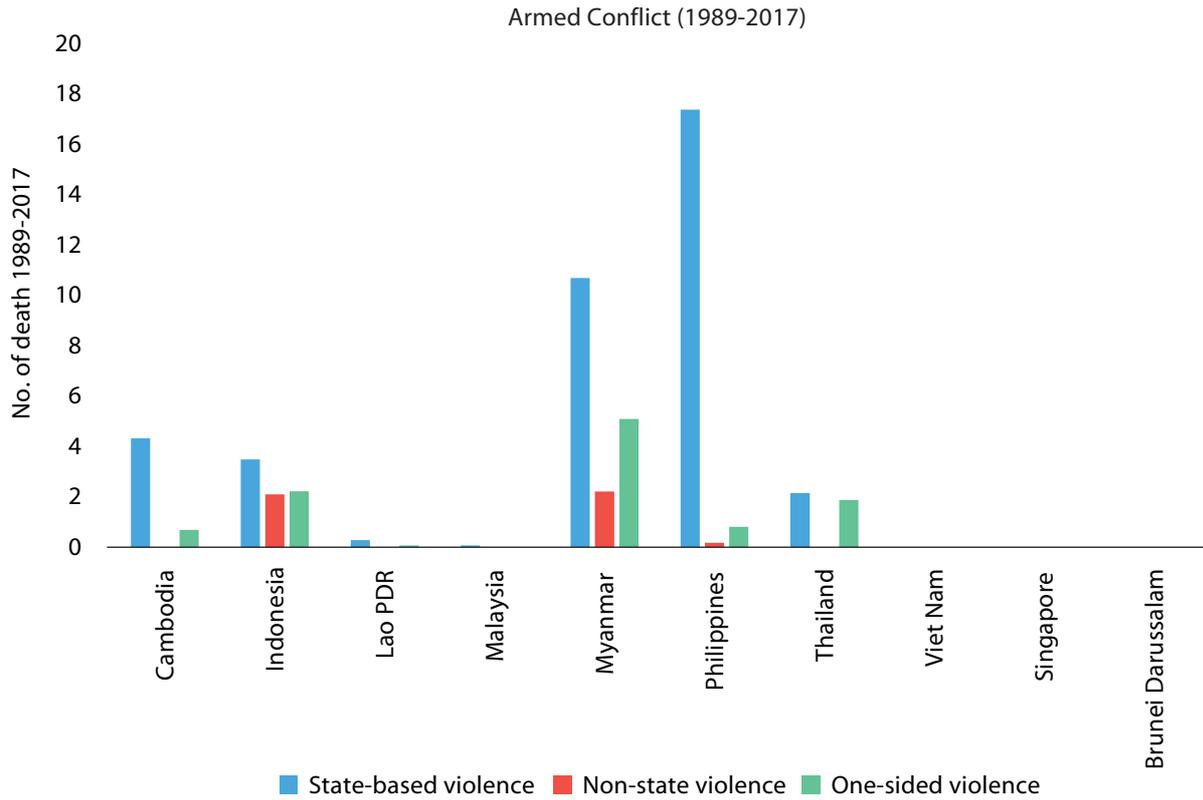
Note: see <https://dnnsociety.org/2018/03/02/earthquakes-in-southeast-asia-in-50-years/>

Figure 6: Natural disasters: summary of occurrences at the regional level



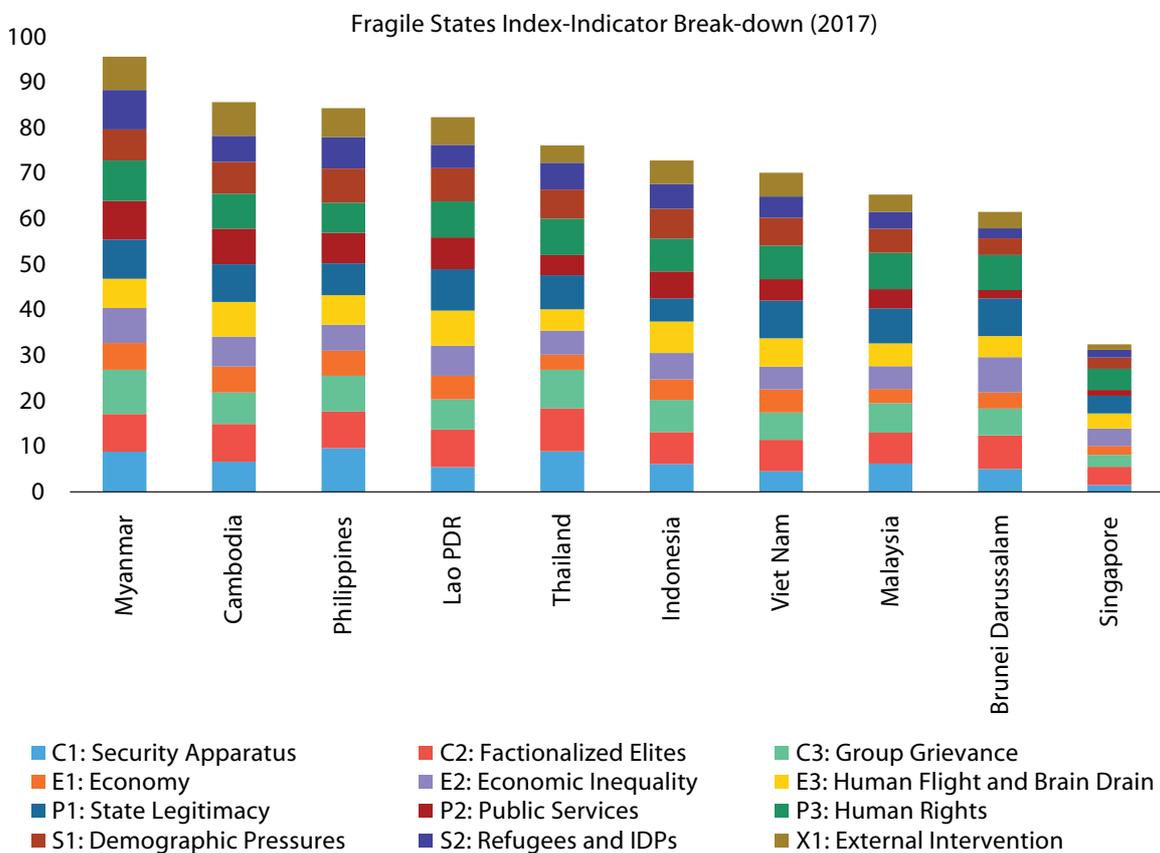
Source: EM-DAT

Figure 7: Shocks associated with violence per country



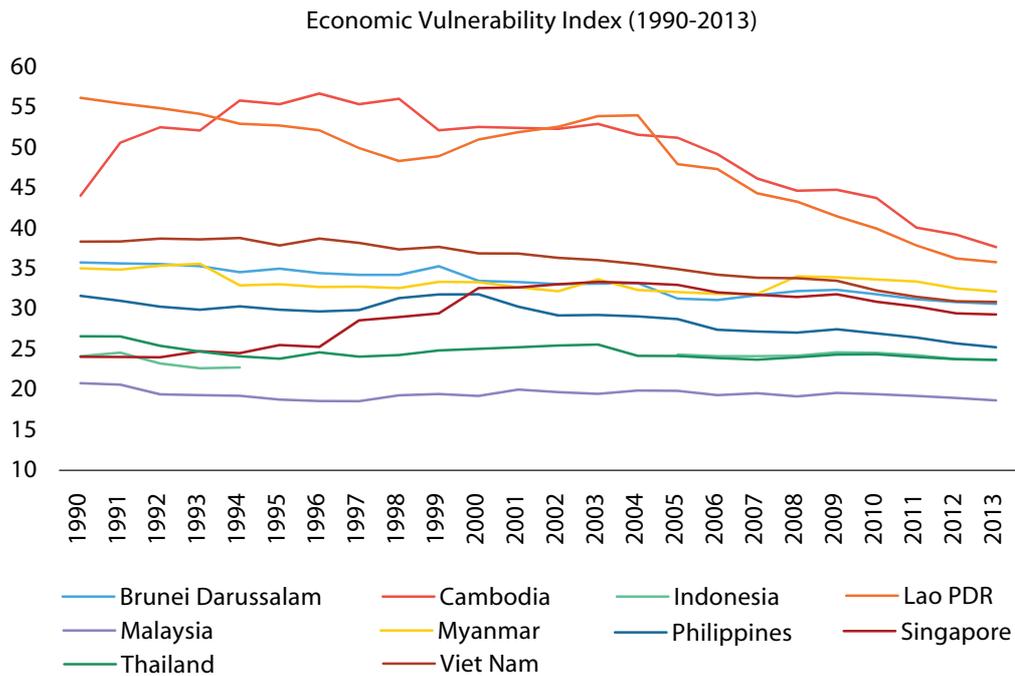
Source: UU-UCDP

Figure 8: Fragile States Index rankings for AMS



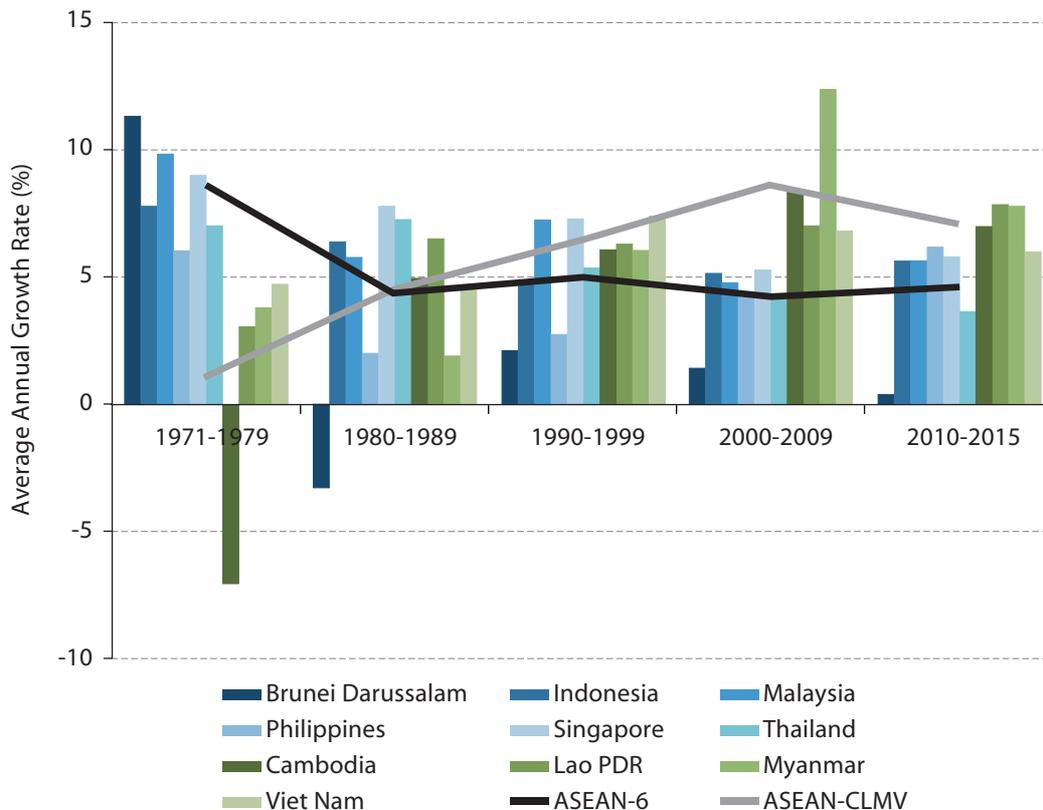
Source: FP (2018)

Figure 9: Economic Vulnerability Index



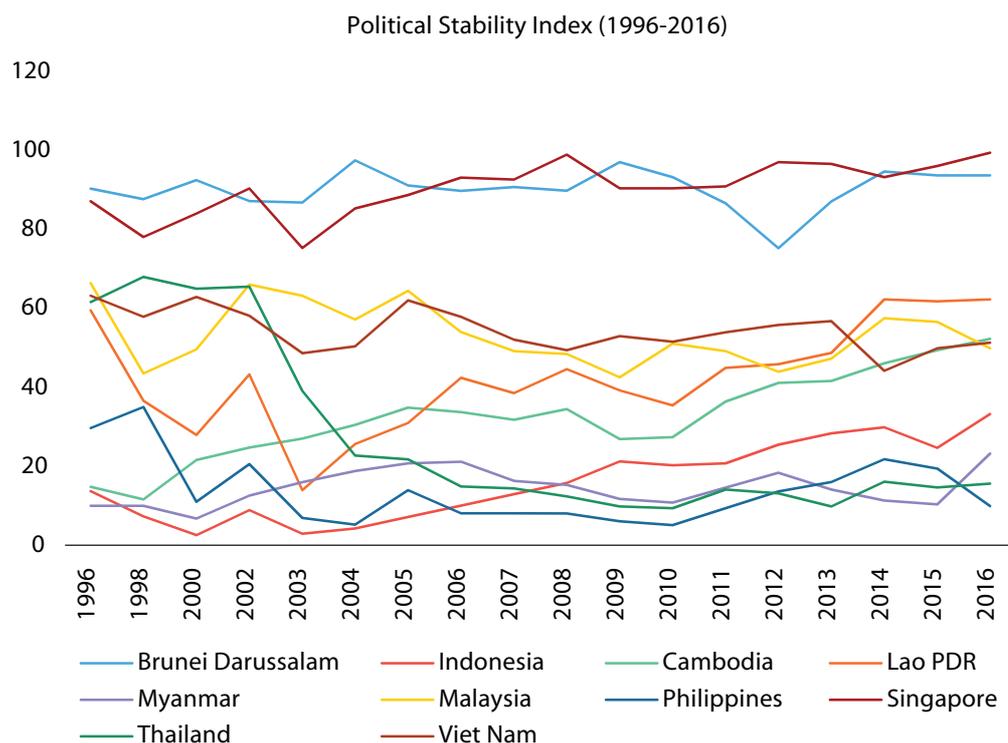
Source: UN-DESA (2015)

Figure 10: ASEAN GDP growth



Source: (UNCTAD 2017)

Figure 11: Political Stability Index



Source: WB-GI (2016)

A.2 Country risk data for all AMS

This section uses EM-DAT data (Emergency Events Database (EM-DAT) <https://www.emdat.be/>) for data on climate and natural shock occurrences between 1970 and 2018, the Uppsala database (www.ucdp.uu.se/#/exploratory) for data on armed conflict between 1989 and 2018.

Brunei Darussalam

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Wildfire	1	-	-	2,000
Storm	2	-	-	-
Flood	6	10	-	-

Cambodia

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Complex Disaster (Famine)	1	-	900,000	-
Drought	6	-	9,050,000	138,000
Flood	19	1,641	13,297,587	1,421,100
Storm	4	44	184,391	10
Armed Conflict	-	5,001	-	-

Indonesia

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	9	1,340	4,600,220	160,200
Earthquake	100	181,500	9,184,083	11,796,356
Flood	184	6,232	9,763,629	6,753,216
Landslide	57	2,150	497,942	158,745
Mass movement (dry)	1	131	701	1,000
Storm	12	1,724	32,283	1,000
Volcanic activity	46	1,026	1,129,817	530,190
Wildfire	10	319	3,444,142	10,329,000
Armed Conflict	–	7,802	–	–

Malaysia

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	2	–	2,205,000	–
Earthquake	2	104	5,073	500,002
Flood	46	290	1,190,780	1,467,500
Landslide	4	96	291	–
Mass movement (dry)	1	72	–	–
Storm	7	275	48,372	53,000
Wildfire	4	–	3,000	302,000
Armed Conflict ¹	–	71	–	–

Note: ¹ Armed conflict data available only for post 2012.

Lao PDR

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	5	–	4,250,000	1,000
Flood	23	212	4,483,011	154,078
Storm	6	72	1,436,199	405,951
Armed Conflict	–	352	–	–

Myanmar

Disaster type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Earthquake	6	187	39,775	514,770
Flood	28	718	5,241,342	257,655
Landslide	7	205	147,582	–
Mass movement (dry)	1	17	–	–
Storm	12	138,944	3,205,601	4,072,288
Wildfire	2	8	78,588	11,000
Armed Conflict	–	17 969	–	–

Philippines

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	9	8	6,734,894	148,852
Earthquake	25	8,932	5,854,875	598,516
Flood	149	3,639	33,510,034	3,811,363
Landslide	29	2,401	317,546	33,281
Mass movement (dry)	3	361	–	–
Storm	309	42,458	162,894,610	21,339,688
Volcanic activity	21	719	1,709,279	220,525
Wildfire	1	2	300	–
Armed Conflict	–	18,333	–	–

Singapore

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Armed Conflict	–	–	–	–

Thailand

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	11	–	41,982,602	3,725,500
Earthquake	4	8,347	84,546	1,062,000
Extreme temperature	2	77	1,000,000	–
Flood	78	4,112	59,936,612	46,842,808
Landslide	3	47	43,110	–
Storm	35	948	4,266,063	892,600
Wildfire	1	–	–	–
Armed Conflict	–	4,021	–	–

Vietnam

Shock Type	Occurrences	Total deaths	Total affected	Total damage ('000 US\$)
Drought	6	–	7,860,000	7,399,120
Flood	83	5,457	32,712,448	4,289,162
Insect infestation	1	–	–	–
Landslide	6	330	39,074	2,300
Storm	104	11,248	52,650,361	9,850,792
Wildfire	1	–	–	–
Armed Conflict	–	–	–	–

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