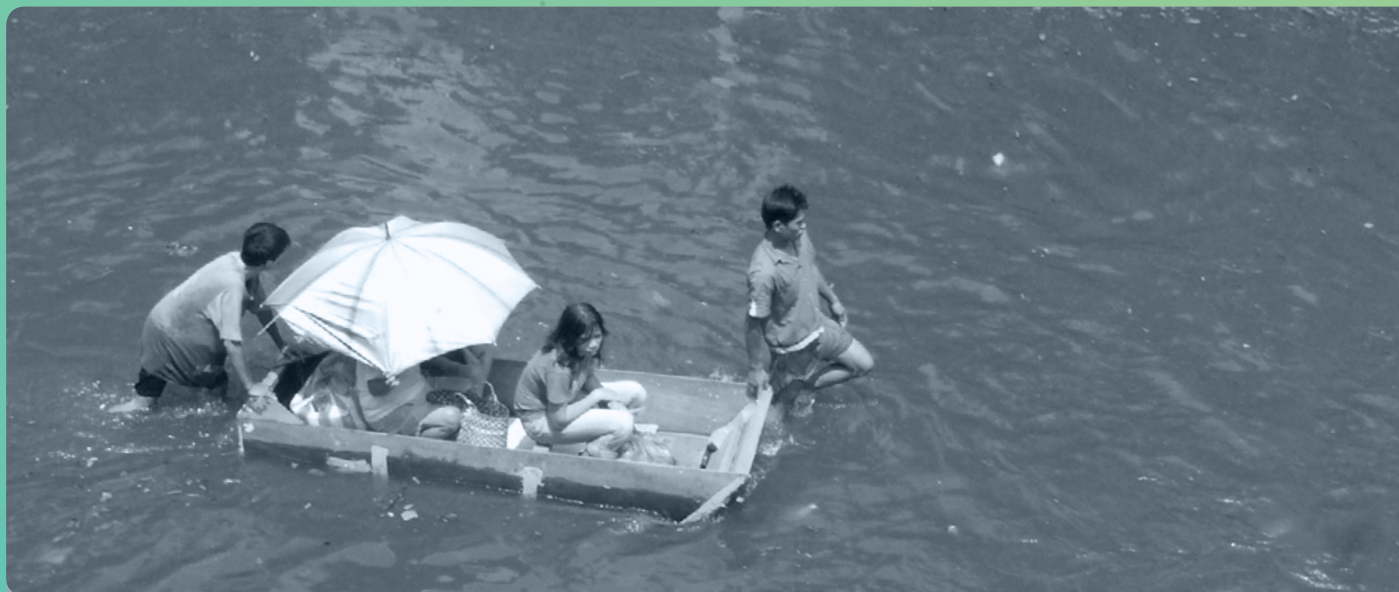




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BUILDING ON GOVERNMENT SYSTEMS FOR SHOCK PREPAREDNESS AND RESPONSE:

THE ROLE OF SOCIAL ASSISTANCE DATA AND INFORMATION

Valentina Barca and Rodolfo Beazley

January 2019

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The report should be attributed as Barca V. and Beazley R. (2019). *Building on government systems for shock preparedness and response: the role of social assistance data and information*. Canberra: Commonwealth of Australia, Department of Foreign Affairs and Trade.

ISBN: 978-1-74322-468-7 (PDF document)

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Acknowledgements

A wide range of people have provided valuable contributions to this study, without which this research would not have been possible. We want to start by thanking Joanna Pickles from the Department of Foreign Affairs and Trade (DFAT) of Australia, for her precious support and inputs throughout the development of this publication. Next, thanks goes to our peer reviewers, Clare O’Brien (World Food Programme (WFP), formerly Oxford Policy Management), Francesca Bastagli (Overseas Development Institute), and Gordon Denoon (DFAT), for their thoughtful and detailed comments. We would also like to acknowledge the ideas that have made their way into this publication via engagement with Heather Kindness (DFID), Francesca De Ceglie (WFP), Jacqui Powell (DFAT), Carlo del Ninno, Colin Andrews, and Thomas Bowen (World Bank). Graphic design for this report was provided by Francesco Abbadessa.

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Abbreviations

BISP	Benazir Income Support programme (Pakistan)	NADRA	National Database & Registration Authority (Pakistan)
CBT	Community-based targeting	NGO	Non-governmental organisation
CGP	Child Grant Programme (Lesotho)	NISSA	National Information System for Social Assistance (Lesotho)
DFAT	Department of Foreign Affairs and Trade (Australia)	NSER	National Socioeconomic Register (Pakistan)
DFID	Department for International Development (UK)	PMT	Proxy means testing
DRM	Disaster risk management	PSNP	Productive Safety Net Programme (Ethiopia)
DSW	Department Social Welfare	PSSB	Programa Subsídio Social Básico – Basic Social Security Programme (Mozambique)
ECTP	Emergency Cash Transfer Programme (Nepal)	RFM	Risk-Financing Mechanism
ESSN	Emergency Social Safety Net (Turkey)	RSH	Registro Social de Hogares – Social Registry of Households (Chile)
EWS	Early warning system	SIUBEN	Sistema Único de Beneficiarios – Unique System for Beneficiaries (Dominican Republic)
FIBE	Ficha Básica de Emergencia – Basic Emergency Form (Chile)	UBR	Unified Beneficiary Registry (Malawi)
GDPR	General Data Protection Regulation	UNICEF	UN Children’s Fund
GIS	Geographic information system	WFP	World Food Programme
HSNP	Hunger Safety Net Programme		
IRC	International Rescue Committee		
ISAS	Integrated Social Assistance System		
IVACC	Index of Vulnerability to Climate Shocks (Dominican Republic)		
LVAC	Lesotho Vulnerability Assessment Committee		
MIES	Ministerio de Inclusion Economica y Social – Ministry of Social and Economic Inclusion (Ecuador)		
MIS	Management information system		
MSD	Ministry of Social Development		
MVAC	Malawi Vulnerability Assessment Committee		

EXECUTIVE SUMMARY

In a context of increasing frequency, size and duration of disasters and crises globally, the limitations of standard approaches to humanitarian response have come to the forefront, causing governments and international agencies to pledge to “use existing resources and capabilities better to shrink humanitarian needs over the long term” (Grand Bargain, 2016). The social protection sector can have an important role to play in this process, as recent research on “Shock Responsive Social Protection” has confirmed (O’Brien et al., 2018, Beazley et al. forthcoming).

This research focuses on the specific role of social assistance data and broader information systems and capabilities. In particular, it looks at their potential role in identifying beneficiaries and delivering benefits to them in the aftermath of a shock.

The research presented draws on recent international experiences in using social assistance data systems for shock response. It builds on an earlier briefing note on the “Factors affecting the usefulness of existing social protection databases in disaster preparedness and response” (O’Brien and Barca, 2017), co-financed by the UK’s Department for International Development (DFID) and Australia’s Department of Foreign Affairs and Trade (DFAT).

The main **findings** include the following:

- **Depending on their set-up, existing social assistance data systems can offer a range of potential uses for shock response.** For instance, as a source of household and individual level data; comprehensive socio-economic data; operational data (that is useful to identify, trace and deliver benefits); geo-referenced or geographically-disaggregated data; and (in an increasing number of countries) data that can help to capture shock vulnerability in advance of a shock. They also sometimes feature interoperability or data sharing arrangements with other government registries and are underpinned by established capacity to collect, store, and manage data.
- **The varied nature and quality of social assistance registries and broader information systems however, means that their role and use in emergencies can only be identified with reference to the particularities of the registries in the country and context under review.** Social assistance registries and broader information systems vary widely across countries – if they are set up at all. Key variations include: their coverage; whose data and what data they collect and store; how data are collected and updated; who is responsible for data collection, storage, and management; whether/how information is integrated to other government databases, and; what processes and authorisation levels are in place for data sharing (see [Section 2](#) and [Box 1](#)).
- **There are six complementary dimensions that can be used as a framework to assess the potential utility of social assistance registries and their broader information systems to be useful in response to shocks** – which derive from the variations described above (see set of questions provided in [Table 6](#) and [Section 3](#)):
 - **Completeness.** This refers to the level of data coverage and number of records compared with what would be perceived as a full set of records—for instance, 100 percent of the population in affected areas, or 100 percent of those in need. An existing social assistance registry may assist an emergency response if the data cover all of those affected by the shock, or a high enough proportion. Important

distinctions need to be made between data on beneficiaries and registered non-beneficiaries, acknowledging that neither are likely to offer full coverage of populations affected (see [Figure 2](#))

- **Relevance.** Data are relevant if they contain the variables required for the intended purpose. Data collected for the provision of long-term social assistance (i.e. another purpose) may not always be relevant for shock response if they do not contain variables that comprehensively identify households in affected areas, and ideally that assess household needs and enable an immediate response.
 - **Currency.** Data currency is the degree to which data are current (up to date), and thus represent households' real circumstances at the required point in time. It is, of course, impossible for standard social protection data to reflect the reality after a disaster, meaning some form of post-disaster revalidation is always required. The relevant factor is how up to date existing data are overall – often an issue for concern in many countries reviewed.
 - **Accessibility.** This refers to the ease with which potential users - most likely national or local government agencies and departments, or their partners - can obtain the data. Accessibility can vary widely depending on who the users are and what processes and authorisation levels are in place for data sharing; the underlying policy and legislation; whether or not data are maintained and stored digitally; existing provisions for data security and privacy; what type of data interfaces are provided, etc.
 - **Accuracy.** Data are considered to be accurate if they are free from errors and omission. Accuracy means that a high level of confidence can be placed in the data, affecting their wider credibility and ultimately their usability.
 - **Data protection.** Data are secure when they are protected against unauthorised access, misuse, or corruption. Data privacy is guaranteed where data are utilised while protecting an individual's privacy preferences and their personally identifiable information. In emergency contexts, concerns regarding misusing or losing such information – potentially exposing households to further vulnerability – are heightened.
- **Depending on the six dimensions discussed above, social assistance data on households and individuals can inform decision making before, during, and after a shock** – as a complement to other data sources and data collection efforts:
 - **Before a shock hits**, data can inform risk analysis and vulnerability assessments, as well as planning and preparedness measures.
 - **When a shock is about to occur**, and immediately after it, early warning systems can enable timely responses by leveraging existing data.
 - **After the shock**, data can inform key decisions in relation to identifying who to support (targeting) and the type of support required. [Table 5](#) usefully breaks the main options down.
 - **In the long-run**, data and information can enable learning and inform policy changes – for example by incorporating shock-affected caseloads into routine social protection provision.
 - **While there are recent international experiences successfully using social assistance data, they are not widespread – and have sometimes encountered challenges.** For example, focusing on shock response:
 - **Vertical expansions** and programmes “**piggybacking**” on beneficiary data require very little additional efforts (e.g. in terms of adapting processes) and can therefore enable timely responses, if adequately planned in advance. However, they present significant drawbacks in terms of the coverage of affected populations, which need explicit addressing (see [Section 4.2.1](#) and [Box 7](#)). Moreover, with no preparedness in terms of financing and coordination, timeliness can be significantly compromised ([Section 5.1](#)).
 - **Horizontal expansions** (via existing or new “**piggybacked**” programmes), on the other hand, inherently involve more complex processes and political decisions ([Section 4.2.2](#)). Moreover, few countries have developed social registries with the characteristics needed for these to be truly useful in response to shocks (e.g. sufficient coverage). This does not mean such a strategy is not possible, it

simply means it requires significant planning (as for HSNP in Kenya) – including a careful assessment of the various options available for leveraging routine data and systems (Table 5).

- **Overall, there are some important potential benefits of using pre-positioned data and information systems versus “starting from scratch” with new data collection, however building on existing systems is not always achievable and also may come with risks, and trade-offs.** For example:

- **Timeliness of responses can be increased by leveraging existing data, information systems and capacity, if financing is available for timely disbursement of funds and procedures have been planned in advance.** This can be achieved via vertical expansions or piggybacking on beneficiary data. For horizontal expansions, timeliness can be more complex to guarantee if not via planned efforts to: use existing data to target or inform expansions (e.g. via pre-enrolment as for HSNP); build on existing information systems, data collection approaches and capacity, and; leverage data collection technology. On-demand systems for data collection can play a role in countries where they are already present, but can be labour intensive, difficult to maintain in the aftermath of a crisis and present excessive direct, indirect and opportunity costs for applicants (Section 5.1).
- **Ensuring coverage of affected populations, and fully avoiding inclusion and exclusion errors, can be complex when relying solely on existing social assistance data.** Data collected before a shock will never give an exact assessment of needs in the aftermath of a shock (even when the eligibility criteria are altered or where better data are collected beforehand), and beneficiaries of existing programmes are not necessarily those who are most in need. Strategies to reach affected households whose data are not held within existing registries will always be needed – for example in contexts of cross-border displacements it is unlikely that existing registries will contain records on refugees/non-citizens.



The most pressing and important trade-off that needs to be discussed and evaluated by decision makers in advance of a shock is therefore the one between inclusion/exclusion errors (coverage) and timeliness. When it comes to crisis response, timeliness is usually more important than full targeting accuracy, especially in the first phase of assistance. Specifically, inclusion errors can and should be tolerated in the short term – especially as they can contribute to controlling tensions within recipient communities. Exclusion errors, on the other hand, should be minimised by design, and promptly addressed through a sound grievance redress process and complementary approaches to swiftly reach all affected households. The true question for policymakers is whether leveraging existing social assistance systems and data is the best way to balance this trade-off – as it may not be (Section 5.2).

- **There is a value in leveraging shared data for increased coordination amongst social protection, DRM, and humanitarian actors, leading to improved knowledge/learning, reduced duplication of efforts, and potentially saving costs** (for example, administrative costs of data collection, recurring costs of data management, and private costs to citizens. Two experiments in Pakistan and Malawi were set up to explicitly assess the cost-effectiveness of leveraging pre-positioned data, versus new data collection efforts in the aftermath of a shock. Both found some clear advantages, but also several areas that would need addressing ex-ante to make the pilots scalable and useful, as summarised in Box 8 (Section 5.3).



There is a further important trade-off between making social assistance data more accessible to external partners for reduced duplication of efforts/costs and guaranteeing data security and privacy. Responses that build on existing data and systems should not compromise the data security and privacy of registered individuals and households, placing households at risk of increased vulnerability – and potentially compromising humanitarian principles. Better approaches to data collection, management, and sharing – and agreements developed in advance of a shock – can help to minimise risks while ensuring accessibility of valuable data.

To conclude, building on existing data, information systems and related capacities has the potential to (Section 6):

- enable **better planning and preparedness** for shocks by supporting the identification of vulnerable households and the estimation of potential caseloads. Efforts to collect operationally relevant data and expand registries in vulnerable areas can support this function further;
- enable a more **timely response**, by linking to systems for early warning via pre-agreed triggers and/or leveraging existing data and capacities;
- support processes for registering, selecting, and enrolling beneficiaries (“targeting”), **reducing the duplication of efforts** and enhancing the cost-effectiveness of responses; and
- ensure **learning** and new data generated via the shock response informs government capacity and programming decisions (e.g. expansion of caseloads), enhancing longer-term **sustainability**.

Nevertheless, the extent to which these benefits can truly be reaped depend on:

- **Factors that go far beyond the realm of data and information management** – which need to be better factored in within broader “preparedness” measures. E.g. lack of funding, swift decision making and approvals, and robust M&E systems.
- The **practical set-up of the registry and information system in question** which ultimately affects its coverage, relevance, currency, accessibility, accuracy/usability and level of protection.
- **The type of approach to shock response.** Each option has very different implications, and there are major variations within each option that need careful assessment (see [Table 5](#)).
- **The type of shock.** [Table 6](#) summarises some core considerations along different variations in shock characteristics emerging from this research.

The core conclusion is that – before using existing data and information systems at any cost – it will be essential for every country to make a careful assessment of: a) existing data and systems based on the six criteria discussed above; b) the benefits, risks and trade-offs of using existing data versus “starting from scratch”. This can inform a decision on how/if existing data and systems should be used.

It will also be important to consider whether existing systems can be strengthened through adjustments to the way data are collected, stored, and managed. This research stresses the importance of investing in preparatory measures leading to better data quality, which are based on a strong policy vision. It is not only the data that can play an important role, but also the broader capacities to collect, store, manage, and share that data – as well as the underlying information systems and institutional agreements for data sharing. Building each of these ex-ante with an eye to their potential role ex-post will be an essential preparedness step for countries building more adaptive social protection systems. [Box 15](#) provides several examples while [Figure 4](#) provides a useful summary infographic of the key steps needed in this process..

1 INTRODUCTION

1.1 CONTEXT

“Globally, the frequency, size and duration of disasters and crises—be they the consequence of natural phenomena or economic or political shocks—are on the rise” (O’Brien et al., 2018a). In this context, the limitations of standard approaches to humanitarian response have come to the forefront, causing governments and international agencies to pledge to “use existing *resources and capabilities* better to shrink humanitarian needs over the long term” (Grand Bargain, 2016).

Across all social sectors, social protection has received increasing attention in terms of its “resources and capabilities” to address shocks and crises. On the one hand, an ever increasing number of low- and middle-income countries have invested in their social protection systems in recent years, in terms of expanding coverage, overcoming fragmentation, and strengthening underlying delivery systems (World Bank, 2018; International Labour Organization (ILO) 2017). On the other hand, long-term social protection systems are inherently appealing as they “are already intended to meet the needs of the poorest and most vulnerable households”, building resilience (O’Brien et al., 2018a).

It is unsurprising – therefore – that countries around the world have been successfully experimenting with adapting routine social protection programmes and systems to cope with changes in context and demand following large-scale shocks¹ (O’Brien et al., 2018b) – sometimes as government-led initiatives, sometimes with the support of the international community. This is part of the agenda known as “shock-responsive social protection”, a topic which has been researched in depth within a set of publications that are complementary to this one:

- a study financed by the UK’s Department for International Development (DFID), which included a literature review of global experiences (Oxford Policy Management (OPM), 2017), a synthesis report of six country case studies (O’Brien et al., 2018a) and a toolkit to appraise the use of social protection in addressing large-scale shocks (O’Brien et al., 2018b); and
- a study financed by the World Food Programme (WFP) on “Shock Responsive Social Protection in Latin America and the Caribbean”, including a review of regional experiences (Beazley et al., 2016), together with seven country case studies, discussed in a final synthesis report (Beazley et al., forthcoming).

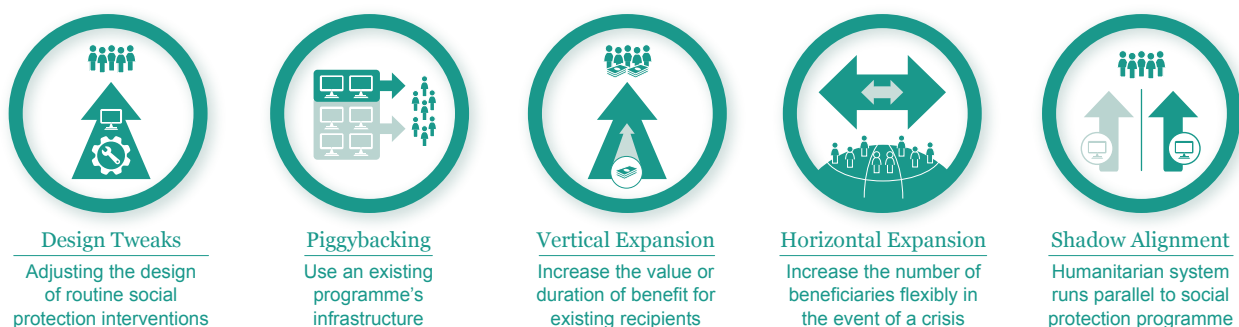
One of the core outputs from the DFID study (adopted for the WFP one and now widely used in the relevant literature) is a typology of five main options for adapting social protection programmes and systems to make them better at responding to shocks (Figure 1). These are (O’Brien et al., 2018b):

- **“design tweaks”**: making adjustments to the design of routine social protection interventions in a way that takes into consideration the crises that a country typically faces;
- **“piggybacking”**: using elements of an existing social protection programme or system while delivering a separate response;

¹ Naturally, all efforts to strengthen or expand routine social protection programmes, or the delivery systems that support them—even in non-crisis times—improve the overall shock-responsiveness of the social protection system. This is because social protection is inherently shock-responsive, being intended to promote the resilience of households or to protect them in the event of a crisis.

- **“vertical expansion”**: temporarily increasing the value or duration of benefits for existing beneficiaries;
- **“horizontal expansion”**: temporarily increasing the number of recipients in an existing social protection programme; and
- **“alignment”**: aligning social protection and/or humanitarian interventions with one another.

Figure 1 Typology of options for shock-responsive adaptation



Source: O' Brien et al., 2018b

Of these five options, all offer the potential for the use of pre-positioned social protection data or broader information systems – especially in contexts where few other data sources are available. For example, providing top-ups to social protection beneficiaries in response to a shock (“vertical expansion”) involves using existing data. Similarly, “horizontal expansion” (temporarily reaching a wider group of beneficiaries) could benefit from existing data on potential beneficiaries—though does not have to—while new programmes could also “piggyback” on existing social protection datasets and/or information systems, if the systems are appropriately designed (Barca and O'Brien, 2017)². “Alignment” could also involve an analysis of existing data to determine strategies for support, while some of the “design tweaks” available to countries wishing to start proofing their existing social protection systems against shocks include the strengthening of their data (especially in shock-prone areas), or using existing data to inform policy/programme adjustments.

In fact, within the aforementioned shock-responsive social protection research (O'Brien et al., 2018; Beazley et al., forthcoming), it became **apparent that among the specific “resources and capabilities” offered by the social protection sector for shock response, key resources that were commonly referenced were data and information systems, or lack thereof** (Heltberg, 2007; Soares, 2009; Pelham et al., 2011; Hobson and Campbell, 2012; Marzo and Mori, 2012; McCord, 2013; Bastagli, 2014; del Ninno et al., 2016; Kukrety, 2016; Hallegatte et al., 2017; Costella and Holmes, 2017; Beazley and Solorzano, 2018).


1.2 STRUCTURE AND FOCUS OF THIS PAPER

This paper builds on an earlier briefing note on the “Factors affecting the usefulness of existing social protection databases in disaster preparedness and response” (Barca and O'Brien, 2017) – co-financed by Australia's Department of Foreign Affairs and Trade (DFAT) and DFID. It sets out to further document countries' experiences to date leveraging existing social protection data and information systems before, during, and after a shock occurs.

Given the potential breadth of this topic, we have chosen to limit the scope of analysis in several ways.

First of all, we focus on social assistance and not social insurance – while acknowledging that social insurance could also play an important role in response to shocks (Bastagli, 2014; Beazley et al., 2016; Grosh et al., 2014; Marzo and Mori, 2012; McCord, 2013; Pelham et al., 2011; and Williams et al., 2016). Secondly, we focus entirely on social assistance data on households and individuals, not on the broader set of data that could also play a role in regard to better planning and responding to shocks (e.g. data on finance, human resources, etc). Third, we give prominence to the analysis of the potential of existing data for vertical and

² The rest of this report discusses when the use of these existing datasets might be appropriate, and the circumstances under which they might be less effective.



horizontal expansions, and for piggybacking – primarily as these are most discussed in the literature. This choice has determined a focus on the role of existing data for identifying beneficiaries and delivering benefits to them, rather than the broader role of data for informing policy decisions.

This paper is organised as follows. [Section 2](#) starts by providing some definitions and context on social assistance data and information systems. [Section 3](#) offers a framework to diagnose any existing system on the basis of six complementary dimensions of “data quality” that enhance or limit their potential uses in emergency contexts. [Section 4](#) analyses global experiences along the response cycle, focusing on the potential for leveraging existing data, information systems, and capacity. [Section 5](#) analyses the potential benefits, risks, and trade-offs of using pre-positioned data and information systems versus “starting from scratch”. [Section 6](#) offers some overarching conclusions and broad recommendations.

2 DATA AND INFORMATION SYSTEMS FOR SOCIAL ASSISTANCE

It is important to start by clarifying some of the terminology. When a social assistance programme is targeted at specific households or individuals, the implementing agency has to maintain records on the people that it reaches. This may include information on, for example, the household members, their socioeconomic situation, and the benefits they receive. Sometimes implementers also keep records on people that have been assessed but found to be ineligible, or who have not yet received any benefit but may be eligible in the future. Where these records on households and/or individuals are held digitally in a database, the database is often referred to as a “registry”³. Where this registry is supported by a software application that transforms data into information, and shares information across government and other stakeholders, this is referred to as an “information system” (Barca, 2017).

Table 1 Main approaches to storing and managing social assistance data

	Serving one programme	Serving multiple programmes
Only retaining data on current beneficiaries	Beneficiary registries track data on beneficiaries and benefits to support programme management and implementation (payments, case management, conditionalities monitoring, and grievance redress) via what is often referred to as a programme management information system (MIS). In terms of population coverage, beneficiary registries maintain information only on beneficiaries of specific programme(s).	Integrated beneficiary registries operate as a data warehouse that collects information from different social programmes and their benefits administration systems, allowing for monitoring and coordination of “who receives what benefits”, and for identifying intended or unintended duplications across programmes.
Retaining data on potential beneficiaries	Social registries support processes of outreach, intake, and registration, and assessment of needs and conditions to determine potential eligibility for a social programme. That assessment usually takes into account measures of socioeconomic status, categorical factors, or a combination of both. In terms of population covered, social registries contain information on all registrants, whether or not they are deemed eligible for, or are enrolled in, a particular social programme.	“Integrated” social registries combine the processes of outreach, intake, and registration, and assessment of needs and conditions to determine potential eligibility for multiple programmes. They serve as platforms that support access to multiple benefits and services that can extend well beyond the sphere of social assistance.

Source: Authors, based on Barca (2017) and Leite et al. (2017). Note: this table presents core typologies, large variations also exist within these.

In Table 1 above we further clarify the terminology, focusing on the four main – and overlapping – types of registries that can serve the social protection sector, acting as a fundamental basis for a broader social protection information system. In the table we distinguish these along two variables: whether they digitally retain data on potential beneficiaries⁴ or not, and whether they serve one or multiple programmes (Barca, 2017, and Leite et al., 2017)⁵. To keep things simple, throughout the paper we use the term “social registry” to refer to social registries serving one or multiple programmes.

³ We use these two terms interchangeably throughout this paper.

⁴ i.e. anyone who is potentially eligible for social assistance, but who is not necessarily currently receiving anything.

⁵ Individual countries often refer to their registries in other ways: what matters is not the name adopted but the function performed, as Table 1 helps to clarify.

When these approaches are combined, and further integrated into a wider set of data sources (civil registration, national ID, tax data, etc.) to serve as an “integrated” information systems, they can serve as a powerful tool for: (Leite et al., 2017):

- **assessing the “demand” for social programmes** by profiling specific needs and conditions of various groups of the population (e.g. via the social registry);
- **monitoring and coordinating the “supply” of social programmes**, assessing gaps and duplications in the coverage of key bundles of benefits and services that could be tailored to the typical needs of profiled groups (e.g. via the integrated beneficiary registry); and
- **supporting the planning, design and delivery of assistance.**

Yet few countries have such an integrated system in place⁶ and existing social assistance registries also vary widely across countries in the ways they are set up in practice – if they are set up at all. We list the main variations in [Box 1](#)⁷. The reasons for these variations are multiple: a) whether they play a role at programme level or at national/integrated level; b) the design of the programme/s they serve (e.g. targeting approach, coverage); c) countries’ needs and context (e.g. political economy, staff capacity, maturity of infrastructure); and d) the preferences and needs of the funders and/or implementing agencies. Each of these variations has implications for the effectiveness of shock response via social assistance programmes, as discussed in [Section 3](#).

Ultimately, the nature and quality of social assistance registries and broader information systems is so varied that it is meaningless to ascribe a generic role to their use in emergencies, and inappropriate to assert that they will always be of use: such a role can only be identified with reference to the particularities of the registries in the country and context under review (Barca and O’Brien, 2018).

⁶ Exceptions include Turkey and Chile.

⁷ Extensive information on this can be found within Barca (2017) and Leite et al. (2017).

Box 1 Core variations in the set-up of social assistance registries and information systems

- **What percentage of the population is covered:** Different social protection registries vary widely in their coverage of the national population (e.g. the beneficiary registry of a small targeted programme versus a national social registry; a social registry with <20 percent population coverage versus a social registry with >80 percent coverage).
- **Whose data are collected and stored:** For example, individual vs household-level data; beneficiary vs non-beneficiary data; data on the “poor” and “vulnerable”, or specific age groups (e.g. for a social pension) vs wider sub-sections of the population).
- **What data are collected and stored:** For example, an extensive dataset on household socioeconomic conditions vs a limited dataset with key variables; operationally relevant data collected at enrolment (e.g. bank account) vs basic data for eligibility determination; biometric information or not; data on potential exposure to covariate risks and shocks vs not; etc.
- **How data are collected:** For many social protection registries, the two most frequent approaches to data collection are: a) on-demand registration, which relies on households going to an office (or accessing an application / website) to apply; b) census-survey registration, which entails all or selected households in an area being interviewed at selected intervals. These both offer significant advantages and disadvantages (see Barca (2017) for a full list).
- **Frequency of updates:** Depending on the approach to data collection, on national policy decisions, and on available budgets, the data may be updated on an ongoing basis (ideal) or periodically (every two to three years at most, but often less frequently for logistical reasons).
- **Approach to information integration:** For example, whether data are linked to other databases (social protection and beyond) for data sourcing / verification / removing duplication, ideally through the use of a unique identifier (national ID or other).
- **How data are validated, stored, and maintained:** What procedures are in place to guarantee data integrity, affecting trustworthiness.
- **Who is responsible for data collection, storage, and management:** For example, whether this is performed in-house by the lead social sector ministry, through municipal offices, through other state institutions (e.g. statistics office), or through contracted third partners, affecting trust in the data’s integrity.
- **Level of data security / privacy guaranteed:** This depends on existing legislation and provisions, including adherence to international standards, such as the United Nations Guidelines for the Regulation of Computerized Personal Data Files and ISO 27001.
- **What processes and authorisation levels are in place for data sharing:** For example, web service vs batch processes; ad hoc v regular through memoranda of understanding, etc.

Source: Barca and O’Brien (2017); Barca (2017)

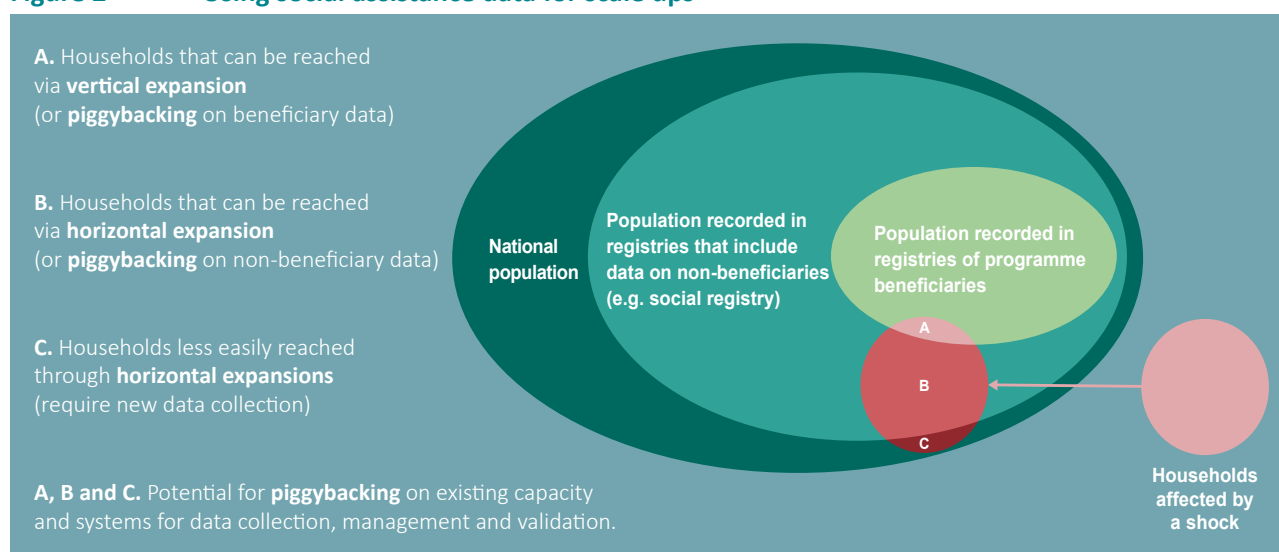
3 WHEN ARE SOCIAL ASSISTANCE DATA FIT FOR USE IN RESPONSE TO SHOCKS?

Having stressed the variations across countries in terms of existing social assistance registries and their broader information systems, this section provides a framework to diagnose any existing system on the basis of six complementary dimensions of “data quality” that enhance or limit their potential uses in emergency contexts. This is most often a different purpose to the one they had been designed for, i.e. serving routine social assistance delivery. To do so, we build on a framework by Wang and Strong (1996): completeness (coverage), data relevance (sometimes classified as “appropriateness”), data currency, accessibility, and accuracy. We also add a further dimension: data security and privacy. These criteria should be used in combination, as they all have important bearings on potential outcomes, while also recognising there may be some trade-offs between them.

3.1 COMPLETENESS (COVERAGE)

Completeness refers to the number of records compared with what would be perceived as a full set of records—100 percent of the population in affected areas, or 100 percent of those in need. An existing social assistance registry may assist an emergency response if the data cover all of those affected by the shock, or at least a high enough proportion. Important distinctions need to be made between data on beneficiaries and registered non-beneficiaries, as shown in Figure 2 and discussed below. Moreover, there are likely to always be households that are not registered within any existing social assistance registry – area “C” in Figure 2.

Figure 2 Using social assistance data for scale ups



Source: Barca and O’Brien, 2017. Note: The sizes of the different ovals are arbitrary and will vary widely by country. “Beneficiaries” refers to people receiving support from government social assistance programmes.

3.1.1 Data on beneficiaries

Registries that cover beneficiaries only (area “A” in Figure 2) rarely cover 100 percent of the population in any given area – and often cover very low proportions of individuals and households (ILO, 2017; World Bank, 2018⁸). Shock responses that only support existing social protection cohorts (via vertical expansion or piggybacking on beneficiary data) will inevitably miss shock-affected households, as these quotes from district officials in Nepal showcase⁹ (Merttens et al., 2017):

[This district] was the most severely affected district and a large population was affected by the crisis. Therefore, while the support reached those who were vulnerable, it excluded many households that were affected by the crisis. 90,000 households were affected by the earthquake and those on the social security list were 30,000 people, i.e. approx. 25,000 households...this is approximately 30 percent of the earthquake-affected people in the district. (District-level key informant interview)

This is not a good way to target the right people after the earthquake. If the target is to give it [the transfer] to poor people, then you can give the money at any time. If it is for the earthquake victims though, then you should determine the victims before distributing the money. (Village-/ward-level key informant interview)

Yet would beneficiary registries cover a good proportion of those in need, assuming routine beneficiaries are among the most vulnerable to shocks? We briefly discuss the main factors affecting this, which should be kept in mind when planning vertical expansions:

- **Geographic targeting.** Many social assistance interventions – such as cash and in-kind transfers, public works programmes, and school feeding programmes – complement other eligibility criteria with geographic targeting, limiting national coverage and posing risks in terms of using existing data for shock response (see Box 2).

Box 2 Geographic targeting of existing programmes and implications for shock response

Many social assistance programmes operate primarily in rural settings, where “poverty is traditionally more widespread and deeper than in urban areas” – and where programme implementation can be easier. Yet urban areas can be just as affected by shocks as rural areas – if not more so – partly because they are unable to sustain their food consumption through own production (Grosh et al., 2011; Gentilini, 2015). As an example, in Tanzania, Dar es Salaam is one of the most flood-affected areas of the country, but it is also the least poor, meaning only 2.3 percent of households in Dar are included in the country’s flagship Productive Social safety Net (PSSN) registry (Maher et al., forthcoming). In the aftermath of the 2008/9 economic crisis, Mexico transformed its Oportunidades (now PROSPERA) and Food Assistance Program to better cover urban areas (World Bank and International Monetary Fund, 2012).

Geographic targeting may also take place due to budget restrictions, leading countries to initially prioritise programme coverage in selected administrative areas. This is a positive practice in terms of “preparedness” if coverage is effectively guaranteed within those areas that are most likely to be affected by predictable and recurrent shocks (e.g. drought-affected areas, river basins, coastal areas affected by typhoons). However, this is often not the main criterion guiding programme coverage and expansion. As an example, in Lesotho, the National Information System for Social Assistance (NISSA) social registry and its Child Grant Programme (CGP) covered Lesotho’s 10 districts at the time of the El Niño crisis in mid-2016, but only 36 of the 64 community councils (subdistricts) within them, some initially selected by lottery in the absence of sufficient resources (Kardan et al., 2017b).

- **Broader targeting strategy** (eligibility criteria and how these are operationalised). Overall, the literature available to date on this question is sufficient to show that the underlying targeting approach of routine

⁸ For example, the World Bank’s State of Social Safety Nets 2018 stresses “significant gaps in program coverage” around the globe, and especially “in low-income countries, where only 18 percent of the poorest quintile are covered by SSN [social safety net] programs”

⁹ This is the case for large-scale disasters that do not necessarily affect existing social protection recipients disproportionately relative to non-recipients.

programmes does matter, but it does not fully elucidate how. Nevertheless, as discussed within the 2017 shock-responsive literature review (OPM, 2017), the following considerations do emerge:

- **Programmes that are effectively targeted at the poor and vulnerable can ensure coverage of those who are most in need in the aftermath of a shock** – if complemented by interventions that reach other affected households¹⁰. It is now widely recognised that poor people are more vulnerable to spikes in food prices; more dependent on unstable income sources; most often exposed to disasters; and strongly affected by diseases and health issues that shocks tend to magnify (Grosh et al., 2011; Hallegatte et al., 2016). Poverty-targeted programmes also tend to collect a wider number of variables on socioeconomic conditions, vulnerabilities, and livelihoods (depending on the exact design of the system for eligibility verification). These can be used to inform a different approach to eligibility determination during the response phase, potentially enabling rapid expansions of caseload (e.g. not applying the same criteria).
- **The specific approach used to determining eligibility will also play a role, as will the type of shock.** For example, programmes that target the chronically food insecure will have a greater overlap in caseload with an emergency caused by food insecurity than with an economic crisis such as the triple F crisis (where one of the worst affected groups were the working poor in urban areas, who were not generally included in social assistance schemes) (McCord, 2013; Slater and Bhuvanendra, 2013; OPM, 2017). Economic shocks and slow-onset (or seasonal) food security crises will particularly affect low-income households, while rapid-onset disasters are more likely to affect a population transversally (O’Brien et al., 2018).
- **Programmes that target categorical groups may be less effective for reaching the desired caseload in a humanitarian crisis felt by all, but they have other advantages** (Slater and Bhuvanendra, 2013). Universal categorical programmes (such as social pensions or child grants) often have broader coverage than poverty-targeted programmes and can be less socially divisive. They can also be faster and easier to scale up rapidly as they have lower data requirements¹¹. Moreover, children, the elderly, and those who are disabled or labour constrained are among the categories that are most affected by shocks.
- **The qualifying conditions of different programmes also play a role.** Qualifying conditions that have the most restrictive implications in terms of shock response – which can potentially be waived in the aftermath of a crisis (O’Brien et al., 2018) – include the following: a) requirements for citizenship or prolonged residence in a given location (which are common for many social assistance programmes, and which sometimes directly exclude internally-displaced persons (IDPs) and/or refugees); b) requirements for formal national identification (ISPA, 2017; Barca, 2017). These requirements can be even harder to ensure in the aftermath of a crisis (e.g. where there are lost/damaged IDs) and can also directly exclude IDPs and/or refugees.

Table 2 below summarises some of these considerations, going one step further and looking at the most common approaches to eligibility verification within routine social protection programmes and their implications for scaling coverage (either retaining the same approach or building on existing capacity and systems).

¹⁰ This will be especially necessary for countries operating poverty-targeted programmes that are tightly targeted, with very low coverage (e.g. in the form of guaranteed minimum income schemes or highly rationed benefits) (Isik-Dikmelik 2012; O’Brien et al., 2018).

¹¹ i.e. fewer variables will need to be collected and evaluated.

Table 2 Routine approaches to eligibility verification and main implications for scaling of coverage¹²

Routine approach to eligibility verification	Key consideration (<i>“negative” ones in Italics</i>) Note: for all, caseload prioritised for routine social protection is unlikely to fully correlate to shock-affected households	
	Use of existing data	Use of existing capacity and systems
Self-selection	<ul style="list-style-type: none"> 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) 	<ul style="list-style-type: none"> Low cost and administrative complexity for scaling Risks of over-demand or excessively low transfer values to counteract this
Community-based targeting (CBT)	<ul style="list-style-type: none"> 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) 	<ul style="list-style-type: none"> Knowledge, relationships, and procedures retained by existing selection committees (local authorities, non-governmental organisations (NGOs), etc) can be leveraged in the aftermath of a shock¹³ Risks of political interference and discretion
Proxy means testing (PMT)	<ul style="list-style-type: none"> 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 Static in the context of shocks (PMT cannot predict future changes in purchasing power and transient/new poor) 	<ul style="list-style-type: none"> Capacities and procedures for data collection can be leveraged in the aftermath of a shock
Verified means testing	<ul style="list-style-type: none"> Likely to collect and retain data on non-beneficiaries Targeted category (“poor”) are often most vulnerable to shocks Static in the context of shocks 	<ul style="list-style-type: none"> Procedures/interoperability/capacity for verified means testing can be leveraged in the aftermath of a shock Risk of cumbersome process
Unverified means testing		<ul style="list-style-type: none"> Potential for simple and swift targeting in the aftermath of a shock based on existing systems Higher risk of inclusion errors
Categorical targeting (verification of “status”)	<ul style="list-style-type: none"> Targeted categories (children, the elderly, and those who are disabled or labour constrained) may be among those that are most affected by shocks 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) 	<ul style="list-style-type: none"> Low cost and administrative complexity for scaling (low data requirements: e.g. age, employment status, disability status, etc). Can piggyback on existing systems.

Source: Authors, based on Pelham et al. (2011); Marzo and Mori (2012); Bastagli and Holmes (2014).

¹² See also Section 3.2 on the relevance of the data produced by different approaches. Also, note that these approaches are often used in combination, meaning classification is not always straightforward.

¹³ Conducting CBT ex-novo in the aftermath of a shock without any pre-existing capacity and systems can be a lengthy and costly exercise, requiring extensive training (Pelham et al., 2011). An example of this process is Ethiopia’s PSNP.

3.1.2 Data on non-beneficiaries

Different programmes and countries have very different coverage of data on non-beneficiaries (those who are not recipients of any social assistance programme at the time of the shock) — and none can claim 100 percent coverage¹⁴ (Barca, 2017; Leite et al., 2017).

Countries that have developed social registries serving several social protection programmes – and who have ensured data-sharing arrangements with other government registries – tend to have higher coverage of non-beneficiaries than those that have fragmented programme registries, as these have an explicit objective to retain data for use across several programmes and over time. [Figure 3](#) indicatively shows coverage for a selected group of countries¹⁵, showcasing wide variations depending on a variety of factors, including the underlying approach to data collection (e.g. census-survey approaches tend to guarantee higher coverage¹⁶) and policy/fiscal choices regarding what proportion of the population should be covered (e.g. only the “poorest” X percent of population) and where data should be collected (e.g. geographic targeting, discussed in [Box 2](#), affects data in social registries too).

It is obvious that the higher the coverage of data on potential beneficiary households, the higher the potential to use existing registries to support shock response via horizontal expansions or piggybacking (see area “B in [Figure 2](#)). In fact, given that shocks can affect the poorest and most vulnerable disproportionately, it can be the case that social registries have significant overlaps with affected populations. Recent examples from Chile, Ecuador, and Peru – three countries that collected new data on affected populations in the aftermath of a disaster – show high percentages of overlap between these data and the data contained within the country’s social registry: between 66 percent and 98 percent (see [Table 3](#)).

Table 3 Coverage of social registries and overlaps with affected households

	Coverage of flagship cash transfer programme	Coverage of the social registry (percent population)	Overlap between the new registry of affected households and the social registry
Chile	NA	74 percent	98 percent Various recent shocks
Ecuador	10 percent Bono de Desarrollo Humano	53 percent	66 percent 2016 earthquake
Peru	8 percent Juntos	60 percent	80 percent 2017 floods

Sources: Authors, based on Beazley et al. (forthcoming).

Of course, there is no “perfect” cut-off in terms of the “ideal” population coverage required to enable smooth horizontal expansions (or piggybacking) using existing social protection data; and in any case, good coverage alone does not justify the use of a registry, if the data are of poor quality in relation to the other criteria analysed in this section. Because of recurrent exposure to drought, the Hunger Safety Net Programme (HSNP) in Kenya has made an explicit choice to guarantee 100 percent coverage of the population in affected districts ([Box 9](#)). In a recent assessment in Malawi, the fact that the country’s “Unified Beneficiary Registry” (a social registry in practice) only registered the “poorest” 50 percent of the population in any given district was assessed as a “key challenge for moving towards a more shock-sensitive social protection approach” (Holmes and Costella, 2017; King and Tranchini, 2017). Moreover, regarding data on beneficiaries, the extent to which non-beneficiary data offer coverage of “those in need” will broadly depend on the targeting strategy of routine user programmes.

¹⁴ The range is 0 percent - 90 percent.

¹⁵ More data on coverage of social registries can be found within Barca (2017) and Leite et al. (2017).

¹⁶ Yet they present trade-offs in terms of data currency, as described in [Section 3.3](#). See also Barca (2017).

Figure 3 Coverage of selected social protection registries: four countries compared



Households potentially affected by a shock

A

Households that can be reached via vertical expansion (or piggybacking on beneficiary data)

B

Households that can be reached via horizontal expansion (or piggybacking on non-beneficiary data)

C

Households less easily reached through horizontal expansions (require new data collection)

A, B and C. Potential for piggybacking on existing capacity and systems for data collection, management and validation.

This having been said, strategies to reach affected households whose data are not held within existing registries will always be needed (area “C” in Figure 2). As an example, in contexts of cross-border displacement, it is unlikely that existing registries will contain records on refugees/non-citizens. This is the reason why Turkey’s Emergency Social Safety Net (ESSN) piggybacked on existing government capacity (the social welfare offices) and information systems (Integrated Social Assistance System (ISAS)), but chose to modify targeting criteria and processes (see Box 14).

3.2 RELEVANCE

Data are relevant if they contain the variables required for the intended purpose. Data collected for the provision of long-term social protection (i.e. another purpose) may not always be relevant for shock response if they do not contain variables that comprehensively identify households in affected areas, and ideally that assess their needs and enable an immediate response.

There are a few reasons why social assistance registries and their broader information systems could be relevant and useful for better preparing and responding to shocks, as a complement to other existing data sources¹⁷ and data collection efforts:

- They can provide **data at household and individual level**. Government administrative records tend to have information on individuals and not households. However, poverty and vulnerability are concepts usually associated with households rather than individuals, and so are many of the policies aimed at addressing them. In this context, it is frequently the case that social assistance registries, in particular those of poverty-targeted schemes, collect and store data at household level.
- They can provide **comprehensive socioeconomic data** about households. Social registries, and poverty-targeted programmes especially, collect substantial data on the socioeconomic characteristics of households, ranging from consumption and income to health, education, nutrition, and many other dimensions of well-being.
- They have an **operational focus**, so are more likely to be up to date than, for example, census-survey data – and can help to identify, trace, and deliver benefits to individuals and households.
- They can provide **geo-referenced** data or data disaggregated by geographic area and/or administrative unit.
- If supported by an integrated beneficiary registry, they can provide information on **who is receiving what** from existing social assistance programmes, providing a platform for better planning and potential responses.
- They sometimes feature **interoperability and data-sharing** agreements with other government registries and information systems.
- They are underpinned by **established capacity** to collect, store, and manage data. This often includes a clear institutional and legal mandate to do so.

Of course, the extent to which this is the case will ultimately depend on how data are collected, stored, and managed in a country, which varies widely – as discussed in Section 2. For ease of understanding, we tackle the issue of relevance from two (overlapping) perspectives: containing the “right” variables for adequate planning and targeting; and containing the “right” variables for being able to actually deliver support in a timely fashion.

¹⁷ For example, household surveys can be a great source of data for policymakers, but have a more limited use in the context of shock response, because: a) though designed to be nationally representative, they are often based on small samples that do not facilitate sound analysis for local-level interventions; b) they often capture inadequate information on receipt of social protection (and on shocks and coping strategies adopted by households); c) they do not have an operational focus and – partly because of their guarantee of anonymity – cannot be used to identify, trace, and deliver benefits to individuals and households surveyed (see also Soares, 2009; World Bank, 2018).

3.2.1 Relevance for planning and targeting

Are the variables contained within existing social assistance registries capable of “predicting” households that may be in need of support in the aftermath of a shock? The literature does not give a clear answer to this question, partly as it depends on a range of factors – most importantly, the type of shock and existing approaches to determining eligibility under standard social assistance programmes (which in turn determine what data are collected and stored).

“In practice, shock-responsive targeting requires information that reflects sudden changes or that has the potential to capture shock-vulnerability in advance of a shock”. (Bastagli, 2014). While no social assistance data collected in advance of a shock can guarantee this to a full extent, recent experiences have stressed the following:

- **High-quality geographic data, ideally geo-localised and/or geographic information system (GIS) data, can make a big difference in disaster response** – as geographic targeting (potentially in combination with other approaches) can be the fastest and least controversial approach to distributing relief in the aftermath of a shock (Hallegatte et al., 2016; Marzo and Mori, 2012). An increasing number of countries worldwide collect these types of data, though not always through GIS (e.g. for on-demand data collection systems this is impossible, unless house-visits are conducted). In Fiji, where such data were not considered “dependable”, the vertical expansion was made to all beneficiary households across the nation, rather than just affected areas (WFP, 2017).
- **Different types of routine social assistance programmes have different information requirements (linked to their target population), which affects the relevance of their registries in a crisis.** For example, a universal social pension will need to collect and retain less information than a poverty-targeted transfer (as eligibility can be determined on the basis of age alone).
- **The types of variables collected for determining eligibility by assessing chronic poverty are not best suited for identifying households which are vulnerable to shocks**¹⁸ (Alderman and Haque, 2005; Grosh et al., 2008; Bastagli, 2014; Bastagli and Holmes, 2014; Kuriakose et al., 2012; McCord, 2013; O’Brien et al., 2018). A number of countries (see [Box 3](#) for selected examples) have started addressing this by collecting and incorporating new variables within their social registries and targeting algorithms, adopting principles of “disaster and climate aware/smart targeting” (Kuriakose et al., 2012, World Bank, 2013; Bastagli, 2014).

Box 3 “Climate-smart/-aware targeting”, selected country examples

Pakistan is including data on climatic vulnerability in its new PMT, while also making efforts to provide geographic coordinates for all registered households. For example, it aims to balance rural–urban and provincial indicators more effectively and to include indicators of agro-climatic zones, to bring in aspects of climate vulnerability. This would enable targeting of populations whose livelihoods are vulnerable to climatic shocks, such as floods and droughts (Watson et al., 2017).

In the **Dominican Republic**, the Índice de Vulnerabilidad ante Choques Climáticos (Index of Vulnerability to Climate Shocks: IVACC), which is part of the Sistema Único de Beneficiarios (SIUBEN) social registry, calculates the probability that a given household may be affected by climate shocks. The IVACC index includes three dimensions: i) housing characteristics (walls, ceiling); ii) estimated income; and iii) proximity to a hazardous natural element (river, stream, or ravine) (Beazley, 2017b).

¹⁸ This is especially valid for programmes that collect and store a wide variety of socioeconomic variables – as poverty is proxied through a PMT or similar ranking exercise. Few of the indicators to construct a PMT are time variant. This is because PMTs for targeting have appreciable fixed costs and, thus, need to be utilised repeatedly. Almost by definition, dynamic indicators are less suited for repeated use than static indicators and, thus, may be comparatively costly (Alderman and Haque, 2005). Moreover, as discussed by Jalan and Ravallion (1999), an “important issue with proxy means testing is not just whether the proxies (say, assets) have a close fit with the desired but unobserved targeting variable (consumption expenditures) in some initial period, but also how variable consumption expenditures are for individual households. If, as people are coming to show, a great deal of poverty is transitory, then programs with fixed criteria will necessarily be inadequate” (Sumarto et al., 2003).

In **Malawi**, the questionnaire of the Unified Beneficiary Registry (UBR) (serving as a social registry and an integrated beneficiary registry) has been modified to identify household vulnerability to annual predictable food gaps and climate shocks. However, according to Holmes and Costella (2017), “this is not sufficient for the UBR to serve as an up-to date targeting tool in case of shocks”.

A recent study by the World Bank in **Niger** compares two of the most widely used approaches to targeting PMT, designed to identify the chronic poor, and the household economy approach, a livelihoods analysis framework. The paper finds that the former performs better at identifying the chronic poor and the latter at identifying households suffering from seasonal food insecurity. However, it also highlights that they both rely largely on the same type of household-level information (Schnitzer, 2016). As a result, small tweaks to the type of data collected can make it possible to estimate not only households in chronic poverty but also those vulnerable to shocks.

- **Linked to the point above, existing variables are often not fit to assess household food availability and needs at the time of a shock.** In Malawi, for example, the UBR questionnaire “includes questions on seasonal food insecurity – but focuses on own food production and crop failures, rather than household ability to buy food”. Moreover, “food security questions are also very time sensitive” (e.g. food consumption in the last week), which means that answers will vary significantly depending on when data were collected. Existing questions also “only capture food production and consumption, not the quality or diversity of food consumed” (Holmes and Costella, 2017) – a challenge also voiced in Lesotho when comparing data from the NISSA social registry and emergency vulnerability assessments (Kardan et al., 2017).
- **The relevance of existing data in the aftermath of a shock will broadly depend on the type of shock.** For example, in contexts of widespread displacement and/or migration, existing registries will fail to provide relevant data. In contexts of slow-onset and recurrent shocks (e.g. seasonal droughts), it is more likely that existing data better correlate with post-shock outcomes.

3.2.2 Relevance for timely delivery

Where data on *non-beneficiaries* are adequately stored and maintained (see Table 1), they rarely contain a full set of operationally relevant variables – bank account numbers, full contact details, identification documents, geo-location, biometric data, recipient and alternate details, etc. – as these are almost always collected in the last stage of data collection during enrolment. For example, Lesotho’s decision to “abandon” the option of horizontally expanding the CGP programme was partly due to the fact “beneficiaries had already passed identity checks and received payment booklets, which non-beneficiaries had not, and which therefore made it less convenient to reach the non-beneficiaries” (Kardan et al., 2017). This is also why the Kenya HSNP example is such an outlier in this regard (see Box 9).

Data on programme beneficiaries may contain more relevant, comprehensive, and actionable variables, but are inherently limited to a smaller – and often specifically targeted – group, being those who have been deemed eligible for specific social protection programmes. These data will therefore be less complete (see Section 3.1). They also often require additional validation exercises, to verify identity and ensure data is up-to-date. This was the case in Yemen, for the Emergency Cash Transfer piggybacking on Social Welfare Fund data.

Moreover, locating and serving beneficiaries in the aftermath of widespread disruption may be a challenge no matter how “relevant” existing data are. This was the case in the Philippines, as discussed in Box 13. In Fiji, a stock-taking exercise noted that these challenges were compounded because of beneficiaries’ remote locations, mobility, and lack of contact information, and because the Department of Social Welfare (DSW) registry was not centralised, adequately linked to other government databases, or updated regularly (WFP, 2017).

3.3 DATA CURRENCY

Data currency is the degree to which data are current (up to date), and thus represent households' real circumstances at the required point in time.

It is, of course, impossible for standard social protection data to reflect the reality after a disaster, meaning some form of post-disaster revalidation is always required. The relevant factor is how up to date existing data are overall. For a registry to be fully effective – for both standard social protection provision and for emergency response – it should aim to offer dynamic inclusion of newcomers (e.g. migrants, newborns), dynamic exclusion of those who have died or moved away, and dynamic management of transitory shocks (e.g. natural disaster, crop failure, unemployment, sickness, pregnancy) (Barca, 2017). Given the nature of poverty and vulnerability, any system that bases targeting on an outdated and static snapshot will likely face serious challenges in providing support to those most in need¹⁹, leading to errors of inclusion and exclusion.

Across a wide variety of countries reviewed for this research, there were indications of struggles in guaranteeing adequate data currency – both for regular provision of social protection and even more so in the aftermath of a shock. Our research also showed that data currency depends on the following:

- **The specific approach to data collection.** “In many countries, the irregular and rare opportunities to enter an administrative register and to update information, limits the potential of such registries to detect sudden increases in need” (Bastagli, 2014). Mass national census surveys are often scheduled every two to three years, but are rarely carried out within this timeframe, primarily because of the large budget and capacity commitment needed. In recent assessments of “readiness” for shock responses – for example, in Malawi and Pakistan – this has been noted as an issue to be addressed (Holmes and Costella, 2017; King and Tranchini, 2017, Watson et al., 2017). Ongoing, on-demand registration partially addresses this concern (see also [Box 14](#)). For more information, including the advantages and challenges of each approach and country experiences, see Barca (2017) and Leite et al. (2017).
- **Approaches to information management:** Beneficiary data – used for the implementation of specific programmes – tend to be more current than the underlying registries on potential beneficiaries, as these are “alive” and updated through continuous contact. In Pakistan, for example, the Benazir Income Support Programme (BISP) data were perceived as more reliable and up to date than National Socioeconomic Register (NSER) data, as they were being continuously used (Watson et al., 2017). Whether these updates are then uploaded into the underlying registry (e.g. the social registry) affects the currency of data overall. Many countries do not do this, for fear of compromising the original data.
- **The underlying approaches to targeting:** For example, poverty-targeted programmes supposedly require more frequent data updating, given the transitory nature of monetary poverty.
- **The type of shock:** Different shocks affect the extent to which household well-being is affected. Conflict or rapid-onset disasters, for example, may cause widespread internal displacement, split up households, or significantly change households' material circumstances.

3.4 ACCESSIBILITY

Accessibility refers to the ease with which potential users—most likely national or local government agencies and departments, or their partners—can obtain the data. This can vary widely, depending on the following factors:

- *Who the users are and what processes and authorisation levels are in place for data sharing:* Information is power, meaning the sharing of data that have been collected at a high cost cannot be guaranteed. Challenges in accessing data are particularly acute for local levels of administration (see [Box 4](#)) and

¹⁹ Costa Rica carried out a study to determine the length of validity of variables used for targeting. The conclusion was as follows: “the variables associated with income and occupation have a higher dynamism and ought to be updated every 1 to 1.5 years, while the variables associated with housing and ownership of goods have a lower dynamism, so that an updating every 3 to 3.5 years is recommended” (Irrázaval, 2004).

non-government actors (see [Box 5](#)). Data sharing may be facilitated where relations between institutions have been built over time (for example, WFP has direct access to data within Kenya's single registry and in Turkey the Ministry of Family and Social Policy has been increasing data sharing with the Turkish Red Crescent over the years), and hampered where data have a political association.

Box 4 Data-sharing challenges for local administrations, the case of Lesotho

In **Lesotho**, direct access to the NISSA social registry during the El Niño crisis was confined to the capital, Maseru, among a limited number of staff in the Ministry of Social Development. This posed a challenge since the identification of specific households for disaster response was led by local rather than national authorities²⁰ (Kardan et al., 2017). For other stakeholders to access the registry, they had to make a request to the ministry, with permissions sanctioned by the principal secretary. These requests were dealt with on an ad hoc basis, with no formal protocol for assessing whether or not to grant permission (Kardan et al., 2017). This issue has been recently addressed following a stock-taking exercise.

Box 5 Data-sharing arrangements in Pakistan

In **Pakistan**, whilst BISP is the owner and custodian of the NSER data that underpin the BISP social protection programme, they rely on the National Database & Registration Authority (NADRA) to host and manage the service, and NADRA has administrative control. BISP can share NSER data with other organisations upon request, though the process to date has been ad hoc and not particularly clear for external agencies. Several government agencies and NGOs have been interested in using the NSER data for targeting poverty-alleviation programmes and to inform pertinent policy questions. Initially, they had to purchase the data from BISP, but they are now provided to agencies without any charge. In 2016 the International Rescue Committee (IRC) successfully accessed and made use of the NSER data for targeting an emergency programme and an evaluation showed that this led to efficiency and effectiveness gains (see [Box 8](#)). BISP is also now working with the World Bank on a pilot in Punjab to “establish protocols for two-way sharing of data”, which will address these issues while also making the NSER more dynamic²¹ (Watson et al., 2017).

- *The underlying policy and legislation:* If national laws, disaster risk management policies, and strategies and emergency plans do not give social protection any role, then it is less likely that data will be accessible and easily shareable. In Mexico, for example, “a parliamentary act (...) requires the Ministries involved (in disaster response) to share a common beneficiary database and information system” (World Bank, 2013).
- *Whether or not data are maintained and stored digitally:* For example, Mozambique's Basic Social Security Programme (PSSB) only retains non-beneficiary data on paper, which are not easily accessible at a time of crisis. The final list of beneficiaries is maintained in a database at delegation level, with a list of potential beneficiaries whom the programme cannot enrol, because of budget limitations and allocated quotas, who are kept as substitutes, and is maintained in paper form in the office (Kardan et al., 2017). Similarly in Fiji the records of “near poor” households were only “available on paper with the regional offices” and had “not been converted electronically” so could not be used for shock response (Mansur et al., 2017).
- *Existing provisions for data security and privacy:* Social protection programmes collect substantial amounts of personal information from potential beneficiaries, posing a risk of misusing or losing such information, potentially exposing households to further vulnerability. This may be a legitimate reason to restrict access, yet it can pose challenges in a crisis (see also [Section 3.6](#)).

²⁰ Noting this problem has now been solved, the following quote clearly represents the challenge at the time of the crisis: “Normally they [the Ministry of Social Development] say, “Use NISSA”, but I haven't seen it with my eyes. I don't know what it is. [...] We have tried by all means to get hold of the NISSA. We are all supposed to get hold of the NISSA. It's a national thing, we've invested a lot of resources in it”. (Key informant, from a District Disaster Management Team).

²¹ This would include sharing any corrections or relevant updates that partners make to the household records (for example, new contact information; new national identity card (CNIC); details of provincial government services that households are accessing) with BISP and NADRA for updating of the national registry (Watson et al., 2017).

- *What type of data interfaces are provided:* For example, web service interfaces with allocated authorisation levels across all relevant stakeholders can enable instant access (and better secure data), as against ad hoc data sharing via CD, email, or USB stick (a common practice in many countries).
- *Capacity:* Capacity in terms of (i) human resources to use the registry and information system, (ii) availability of computers, and (iii) availability of electricity and network connection all affect accessibility. This is a particular issue at local levels of administration, where both staffing and resource constraints are most acute.
- *Type of shock:* The challenges of accessing a registry are compounded in a conflict or rapid-onset natural disaster (e.g. due to destruction of infrastructure). In conflict situations, security concerns around the sharing of personal information are particularly worrying (see below).

3.5 DATA ACCURACY

Data are considered to be accurate if they are free from errors and omission. Accuracy means that a high level of confidence can be placed in the data, affecting their wider credibility and ultimately their usability (which is also determined by the state of users' understanding of the data themselves – e.g. data definitions, documentation, and metadata).

On the one hand, perceived accuracy is a function of the quality of data collection, verification (e.g. through supervisions and cross-checks with other databases), and validation (e.g. applying internal consistency checks, removing duplicates, ensuring standardisation of contents and formats, etc.) (Barca, 2017).

On the other hand, perceived accuracy is very much a function of the perceived trustworthiness of the institution responsible for collecting and housing the data: Agencies may have doubts regarding the accuracy of data collected by others. This was seen to be an issue in several of the countries reviewed for this research, including Mali (O'Brien et al., 2018), Malawi (Holmes and Costella, 2017), and Lesotho, where one of the reasons for discounting the old-age pension registry was the perception that it included a high proportion of people who were dead but had not been removed²² (Kardan et al., 2017).

3.6 DATA PROTECTION: SECURITY AND PRIVACY

Data are secure when they are protected against unauthorised access, misuse, or corruption. Data privacy is guaranteed where data are utilised while protecting an individual's privacy preferences and their personally identifiable information.

Ensuring data security and privacy are fundamental considerations when managing data for standard social assistance provision (Barca, 2017)²³. The sharing of personal information can "threaten the rights, freedoms and personal security of those whose data is processed" (Sepulveda Carmona, 2018).

In emergency contexts, concerns regarding misusing or losing such information – potentially exposing households to further vulnerability – are heightened:

²² Pay officers or local authorities are meant to report the deaths of beneficiaries to the ministry to enable removal of the name from the list. However, this is often not done owing to either collusion or error: mechanisms for verification are not in place, and households are permitted to designate a proxy recipient on behalf of individuals who are too ill to attend the pay point, so it may not be evident if a recipient has died. A recent study suggested that the 80,000 registered recipients of the old-age pension exceeded the total number of people over the age of 70 in the country (Dietrich et al., 2016).

²³ "Determining eligibility for social protection programs requires substantial amounts of personal information to be gathered from potential beneficiaries, including sensitive data on health, income, assets and housing. This poses the risk of misusing or losing such information", potentially exposing households to further vulnerability (CaLP, 2013; Hosein and Nyst, 2013; APSP, 2014). In integrated systems, this risk increases, especially as data are shared across multiple actors. Importantly, the right to information privacy is also embedded in the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights (ICCPR), and the ILO Social Protection Floors Recommendation 2012 (No. 202), which explicitly calls on states to "establish a legal framework to secure and protect private individual information in their social security data systems" (paragraph 23) (Barca, 2017).

- There are **ethical concerns** in relation to using data for a purpose which is different to what was originally intended.
- Sensitive information on a country's citizens, such as that stored for social protection purposes – potentially including their ethnicity, religion, and more – can be swiftly **put to wrong uses** in cases of **conflict and violence**. Examples include the Rwandan genocide and the Holocaust (Seltzer and Anderson, 2001).
- Humanitarian emergencies require rapid decision making and often involve multiple actors with little prior experience coordinating (i.e. no memoranda of understanding in place for data sharing, etc). These situations can easily lead to significant **breeches** of standard protocols for the secure collection, transfer, and storage of information (e.g. non-encrypted sharing of personal information via email or USB/CD), especially in those contexts where country laws do not adhere to international data transfer and information privacy protocols²⁴.
- Adverse events could lead to **loss of data**, if adequate security and backup measures are not put in place²⁵. Of course, electronic storage of data allows data to be recovered more easily in the face of natural or man-made disasters, compared to physical records (World Bank, 2014). However, there have been recent episodes where countries have been affected by electronic data loss in the aftermath of a natural disaster.

The limitations of existing approaches to managing data security and privacy are further being stressed within the framework of the new General Data Protection Regulation (GDPR), approved by the EU Parliament in April 2016 and enforced as of May 2018 for all EU countries and citizens. The rights of people reflected in GDPR are not just the right to privacy, but also the right to be informed, the right to object, and the right to erasure. Few of these are truly respected in the management of standard social protection programmes in many low- and middle-income countries (Sepulveda Carmona, 2018).

Important principles that should be considered for the use of existing social assistance data for the purpose of shock preparedness and response include the following (see CaLP, 2013; OPM, 2015a; Barca, 2017; Sepulveda Carmona, 2018):

- ensuring free, fully informed, and specific consent for information to be processed for a set of predefined purposes (e.g. sharing with humanitarian agency, etc) beyond the provision of routine social assistance;
- ensuring the amount of data collected is the minimum necessary to meet this clearly defined and articulated purpose (see also [Section 3.2](#));
- ensuring personal data are protected during storage, transmission and use, by design. This will involve clear guidelines for use in emergency contexts – and risk mitigation strategies;
- ensuring transparency in all practices relating to personal data (e.g. what data are being processed and by whom). Where possible, this should include ensuring access to and control of personal data; and
- ensuring access to a grievance procedure in cases where rights-holders feel their privacy or data protection has been breached.

An important trade-off which needs to be considered is that between data privacy and accessibility of data. For example, in the Philippines, a new privacy law created barriers for sharing the personal data in the national social registry, Listahanan, with external agencies. Similar experiences have been reported for the ESSN in Turkey, while the Pakistan example in [Box 8](#) underlines the importance of pre-establishing clear agreements on data-sharing processes and security features in advance of a crisis.

²⁴ These include the “Council of Europe’s Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data, the United Nations Guidelines for the Regulation of Computerized Personal Data Files, and the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data” (Barca, 2017).

²⁵ “(...) back-up and security should conform to ISO 27001 – an approach to managing confidential or sensitive information – so that it remains secure, confidential and with its integrity intact” (Barca, 2017).

4 HOW CAN EXISTING SOCIAL ASSISTANCE DATA AND INFORMATION SYSTEMS BE USEFUL FOR SHOCK PREPAREDNESS AND RESPONSE?

Depending on the factors discussed in [Section 3](#), social assistance data on households and individuals can inform decision making before, during, and after a shock. Before a shock hits, data can inform risk analysis and vulnerability assessments, as well as planning and preparedness measures. When a shock is about to occur, and immediately after it, early warning systems can enable timely responses by leveraging existing data. After the shock, data can inform key decisions in relation to identifying the affected population and the type of support required. In the long-run, data and information can enable learning and inform policy changes.

This section discusses recent international experiences in this area, stressing that while many of these uses of existing data/systems are possible, they are not widespread – and have sometimes encountered challenges.

4.1 LEVERAGING EXISTING DATA AND INFORMATION FOR PLANNING AND PREPAREDNESS IN ADVANCE OF A SHOCK

4.1.1 Identifying vulnerable households

Social assistance registries can be designed to provide information for better identifying households that are potentially vulnerable to shocks (not just those who are chronically poor), for improved risk profiling, forecasting and targeting. This was discussed in [Section 3.2.1](#) and [Box 3](#). Since social registries include data on all potential beneficiaries, they can provide a broader dataset for identifying vulnerable households than beneficiary registries.

Moreover, social assistance registries can contain geo-referenced/localised data on households, which can be combined with disaster risk management (DRM) tools and data to provide a more detailed assessment of the population exposed to different risks. The government of Pakistan is in the process of updating the social registry, NSER, with the objective of reaching 90 percent of the population, and has also been capturing GPS coordinates (Watson et al., 2017). In the Dominican Republic, the social registry, SIUBEN, covers 85 percent of the population and all households in the registry are geo-referenced, allowing the government to produce detailed hazard mappings (Beazley, 2017b). When overlain with data from risk and vulnerability assessments and hazard risk mappings, these could become a powerful tool to answer questions on who should be supported and where.

4.1.2 Estimating potential caseloads, pre-empting financing needs, and planning response strategies

Under the assumption that the poor are worse affected by shocks than the non-poor (O'Brien et al., 2018, Hallegate et al., 2016), and since social registries can store the data of a substantial proportion of the poor within a country, social registries can support a rough estimation of potential caseloads for different types of shocks. In the Philippines, for example, the Department for Risk Reduction and Operations Office utilised the social registry, known as *Listahanan*, to create estimates of the number of households, including poor and vulnerable, that would be affected by a disaster given its location/path (Bowen, 2015).

Such data can also be used to simulate and plan contingency financing needs – especially in the context of recurrent and predictable shocks. For example, this is the case for the HSNP in Kenya (Maher et al., forthcoming).

In addition, existing social assistance data can support broader decision making on design and implementation parameters for emergency responses. For example, integrated beneficiary registries can provide information on “who is receiving what” from several social assistance schemes. Existing data can also be used to help define the type and levels of support to provide, and the modality of transfer and delivery.

4.1.3 Collecting operationally relevant data

Existing processes for data collection can be leveraged as a vehicle to collect data that are useful for planning, preparedness, and response in vulnerable regions of a country. This is particularly relevant for recurrent or seasonal shocks. The type of operationally relevant data would depend on the response strategy, but could include phone numbers and bank details, among others (see also [Section 3.2.2](#)). Kenya’s HSNP is commonly cited in the literature as an example of a programme that has collected operationally relevant data in advance (via a de-facto pre-enrolment), enabling timely horizontal expansions in times of need (see [Box 9](#)).

4.1.4 Linking to early warning systems

Triggers for rapid action (e.g. index-based triggers) can be designed using the data generated by existing DRM early warning systems (EWS), and linking this to information within existing social protection registries (O’Brien et al., 2018; Bastagli and Harman, 2015). Much of the experience in this field is focused on EWS for natural hazards, but efforts are ongoing to widen the scope to other types of indicators, such as rising food prices (e.g. WFP’s Safety Net Alert Platform – SNAP). Triggers are typically designed to release funds and initiate early actions when pre-established thresholds are met. These triggers can lead to automatic responses, which implies front-loading the decision-making process and directly linking forecasts to their potential consequences. They can also be used to inform ex-post decision making to trigger early action (Wilkinson et al., 2018).

Some countries are already linking social assistance responses to EWS, particularly in the case of slow-onset shocks (see [Box 5](#)). These types of shocks bring with them “critical questions about when a gradually worsening situation can be classified as an emergency, and at what point the support is required” (OPM, 2015), meaning a predefined trigger – linked to a predefined strategy on how to reach expanded caseloads – can be particularly relevant.

Box 6 EWS as triggers for social assistance – some experiences

In **Kenya** a vegetation condition index automatically triggers the expansion of the cash transfer programme HSNP. The index uses remotely sensed satellite data that indicate, at certain pre-agreed levels, a “severe” risk of drought, in which case affected subcounties are allocated resources sufficient to scale up to 50 percent of their population, or an “extreme” risk of drought, where the additional allocation permits scaling up to 75 percent (OPM, 2017). The emergency payment was first triggered in April 2015. An internal review noted that it was generally successful, with over £3 million being disbursed to 90,000 temporary beneficiary households within just two weeks of being triggered, and that the use of the vegetation condition index was justified (Slater et al., 2015). The emergency payments have been released several times since then, from 2015 to 2017 (OPM, 2017).

The Third Northern **Uganda** Social Action Fund (NUSAF III) includes a component for scaling up assistance to poor and vulnerable households immediately following disaster shocks in northern Uganda. This horizontal expansion is triggered automatically by pre-defined early warning indicators. In 2016, a scale-up was triggered when Karamoja suffered an El Niño-driven drought, leading to assistance being provided to about 25,000 households (Maher and Poulter, 2017).

Ethiopia's PSNP includes a Risk-Financing Mechanism (RFM) to scale up in times of crisis, which is triggered by an EWS. In 2011, the RFM was triggered in response to droughts. Support was provided to an additional caseload of 3.1 million additional beneficiaries, who received transfers for three months (horizontal expansion), and the duration of transfers was extended for an additional three months for 6.5 million existing beneficiaries (vertical expansion) (Slater and Bhuvanendra, 2014).

4.2 LEVERAGING EXISTING DATA AND BROADER INFORMATION SYSTEMS FOR SHOCK RESPONSE

4.2.1 Leveraging beneficiary data in the aftermath of a shock



Data on beneficiaries can make it possible to swiftly reach those in area “A” in Figure 2: beneficiaries affected by a shock. This can be done through vertical expansion or piggybacking



on routine programmes' beneficiary lists. Programme beneficiary registries are often more up to date than social registries and contain more operationally relevant information: bank account details, contact details, addresses, etc. (Barca and O'Brien, 2017). As a consequence, the information contained in these registries can enable providing timely support to programme beneficiaries (see [Section 5.1](#) and [Box 12](#)).

Inevitably, this type of response only reaches those in area “A” in [Figure 2](#), excluding non-beneficiaries ([Box 7](#)). As discussed in [Section 3.1](#), this is often a small percentage of the population. Focusing on supporting existing social assistance cohorts through vertical expansions alone therefore risks missing the majority of shock-affected households (Barca and O'Brien, 2017). The accuracy of responses based on beneficiary data will ultimately depend on the correlation between the targeting design/implementation of routine programmes with the effects of the shock ([Section 3.1](#)). Visually, this is the size of the area “A” relative to the population affected by the shock in [Figure 2](#).

Box 7 Vertical expansions alone will miss shock-affected households – experiences in Ecuador, Mozambique, and Lesotho

In **Ecuador**, only 15 percent of households within the “Registro de Damnificados” (the registry of affected households collected in the aftermath of the 2016 earthquake) were recipients of the country's flagship social assistance programme, the Bono de Desarrollo Humano (Beazley, 2017a).

In **Mozambique**, government estimates of the median population affected by the 2016 droughts was 15 percent across the 71 affected districts. The median coverage of the country's largest social assistance programme in these districts was only 9 percent, suggesting that “even if the recipients of the PSSB were indeed the population most affected by the drought, there was still a large population in need of support” (Kardan et al., 2017).

A similar analysis in **Lesotho** at the time of the 2016 droughts showed that the proportion of people living in CGP households as a percentage of those estimated to be facing survival deficit using the Lesotho Vulnerability Assessment Committee (LVAC) data on food security was on average 28 percent across the affected districts, with high regional variations (Kardan et al., 2017).

Of course, there are strategies to reach missing caseloads:

- Coverage through existing beneficiary registries can be extended by **vertically expanding across multiple programmes**, as was the case in Fiji in the aftermath of Cyclone Winston (Mansur et al., 2018), in Peru in response to the 2017 floods (Beazley, 2018), and in Argentina in response to recent floods, wildfires, and volcanic ash disasters (Beazley et al., 2016). Countries with integrated beneficiary registries and/or good coverage across a variety of programmes addressing risks across the life-cycle²⁶ will be best placed to do this effectively (Barca, 2017).

²⁶ For example, the role of social insurance complementing social assistance should not be forgotten (see [Box 1](#)), though it is not a focus of this paper.

- Other affected households can be covered through **complementary programmes**: for example, this was the case in the Philippines in response to Typhoon Haiyan (Smith et al., 2017).

Beneficiary data are sometimes used not only for inclusion, but also for exclusion from support. Under the assumption that beneficiaries are already receiving support and that such support is adequate to cope with the effects of the shock, some advocate that programme registries can be used for exclusion instead. Nevertheless, there are large risks in doing this without a prior assessment of needs and levels of transfer values across programmes, as humanitarian transfer values are often higher than those for routine social protection assistance (O'Brien et al., 2018).

4.2.2 Leveraging non-beneficiary data in the aftermath of a shock



Existing data stored on non-beneficiaries can be valuable for ensuring a timely response to new caseloads. Specifically, registries containing data on non-beneficiaries can play two roles: i) being used as a basis for providing immediate support to everyone in affected areas (e.g. expanding horizontally) until new data are collected – if required; ii) informing other types of responses (e.g. providing data to complement ex-novo data collection). We discuss each in turn.



The feasibility of using existing non-beneficiary data for a first response is very context-specific – and depends on social registry coverage (among other variables, see Section 3.1 and Table 3).

At the same time, evidence also stresses the risks of using social registry data that are not up-to date, have limited coverage, and are not entirely accessible (see for example Mozambique and Lesotho, Kardan et al., 2017a/b).

While potential advantages in terms of timeliness and cost-effectiveness are clear (see Box 8 for good examples), there are several factors that still need addressing before this becomes a first-best policy option – some of them inextricably linked to the debate over targeting design (see Section 3 and Section 5.2.1).

Box 8 Piggybacking on social registry data – two experiments in Pakistan and Malawi

In **Pakistan**, the IRC has identified beneficiary selection and registration as both the largest time-driver for programme start-up in humanitarian situations and a significant cost-driver for programme delivery. In 2016, the IRC conducted a small pilot research project in Sindh province to compare the efficiency of new data collection through CBT versus the use of the NSER social registry as a pre-positioned registry (which has over 85 percent coverage nationally). Overall results suggest that:

- using pre-positioned data results in a higher level of operational efficiency (but roughly similar cost-efficiency): it could be administered in 16 days, more than twice as fast as CBT's 35 days – but only if relevant memoranda of understanding for data sharing are already in place (the wait period to receive the data was 44 days); and
- using household poverty scores from the NSER to identify and register the most vulnerable households in communities gave similar levels of targeting accuracy as the CBT approach.

Malawi has been hit by consecutive and successive climatic shocks in recent years. Accordingly, humanitarian response (referred to as Malawi Vulnerability Assessment Committee, MVAC) has increased steadily over the years, operating in parallel to social protection systems in the country. Each year, MVAC registers the affected population, implemented by different humanitarian actors without the support of any “central” humanitarian database. This makes it impossible to track which households are receiving MVAC assistance year-on-year.

The UBR-MVAC trial was set up to assess the potential operational benefits of using the UBR²⁷ – developed as a social registry to serve the needs of routine social protection programmes – to contribute to the targeting of beneficiaries for a humanitarian response. Conducted in one district, the trial tested using a ranked UBR list (using PMT) within communities for endorsement using standard humanitarian criteria. It also tested pre-populating certain variables for the endorsed households in the humanitarian

²⁷ Note that the name was subsequently considered misleading and was changed to “Unified Social Registry”.

registration tools, which humanitarian partners could verify and update real time. Households not in the UBR could also be added (with plans to push the data to the UBR). Key findings emerging from the test include the following:

- Using the UBR as an initial list to focus community targeting minimised the influence of traditional authorities (which was sometimes perceived negatively).
- Pre-populated data saved time at critical stages of the response (e.g. registration and data entry), while also enhancing coordination amongst partners across the humanitarian-development nexus.
- The “dynamic” indicators from the UBR could not be used for pre-targeting households (they were too out of date), while demographic data were helpful.
- The PMT used in the UBR to rank households was not suitable for targeting humanitarian response (it was not highly predictive of food vulnerability insecurity).

Going forward, the study stressed that, for better future performance, the MVAC itself should move towards a digitised registry that is used consistently across humanitarian actors and which “pushes” data back to the UBR. Moreover, coverage of the UBR could usefully be expanded.

Sources: King and Tranchini (2017); IRC (2016)

In fact, leveraging data on potential beneficiaries for horizontal expansions or piggybacking is a model that has not been fully replicated in many countries. For example, despite the high levels of overlap between social registries and affected populations in Ecuador and Peru, government explicitly decided not to use these data for a shock response. Ecuador’s government decided to create a registry of affected households to target their response in the aftermath of the 2016 earthquake, meaning payments were made approximately five months after the shock (Beazley, 2017a). In the case of Peru, after months of deliberations, the government decided to vertically expand the programmes *Juntos* and *Pension 65* (Beazley, 2018). In both cases, other types of support were provided at the beginning of the crisis.

There are a few factors that explain the limited number of experiences of the use of existing data for horizontal expansions:

Few countries have social registries with high coverage and high-quality data (Leite et al., 2017; Barca, 2017).

- Static registries will often not be in a position to contain the type of information that is required for identifying the households most affected by a disaster, because the households’ situation may be affected by the disaster itself. For instance, such registries are unlikely to be able to identify who is experiencing food insecurity in a particular drought, or which households have been affected by a flood or cyclone (though geographical data may serve as a useful proxy).
- It is rare for countries to have developed protocols and plans for the use of these types of data in shock response.
- The types of data contained within social registries are not always operationally relevant and usable for an immediate response (because households have been registered but not pre-enrolled, as in the case of HSNP).
- Mandates can constrain the role of ministries / departments in charge of managing social registries.
- Horizontal expansions based on social registry data are bound to lead to significant errors of inclusion (households not affected by the shock receiving support) and exclusion (see also [Section 5.2.1](#)). This is not only a political concern for decision makers, but in some cases rules and regulations may prohibit this type of action (Beazley, 2017a).

Box 9 provides some examples, stressing the potential for creative approaches to horizontal expansions: even countries with no developed national social registry still have the option of expanding to non-beneficiaries of specific programmes in the event of a shock. The options available will depend on their approach to storing and managing data on those who are not currently receiving any assistance.

Box 9 Leveraging non-beneficiary data – experiences in Kenya, Mexico, and Peru.

There are only a handful of experiences of the use of non-beneficiary data for horizontal expansions or piggybacking – and this review found no examples of social registries that had been used for this purpose without being explicitly designed to do so in advance.

- The case of HSNP in northern **Kenya** is the most commonly cited example. HSNP routinely transfers cash to approximately 100,000 poor households. However, the programme has registered almost all other households in the four participating counties—nearly 300,000—and pre-enrolled them, giving them bank accounts and programme cards. These households do not receive routine transfers, but some are eligible to receive ad hoc payments from HSNP in a drought (see [Box 6](#)), depending on their wealth ranking at the time of a targeting exercise (O’Brien et al., 2018). This “no regrets approach” “enables cash to be transferred to any or all HSNP households via their bank accounts within approximately 2 weeks of a decision being made. This is a far quicker large scale response than any other humanitarian distribution mechanism currently in place on the continent” (Fitzgibbon, 2016). Timely disbursement is guaranteed via pre-enrolment of all households and a weather-based trigger system that unlocks pre-identified funding – all thanks to carefully drafted Standard Operating Procedures. For example, in April 2015 nearly £3 million were transferred into the bank accounts of an additional caseload of more than 90,000 temporary beneficiaries in less than 2 weeks from the trigger (Slater, Bailey and Harvey, 2016). The payments were triggered again between November 2016 and May 2017, reaching almost 98,000 additional households (Farhat et al., 2017).
- In **Mexico**, the conditional cash transfer programme PROSPERA expanded horizontally in response to the 2017 earthquake by re-incorporating programme households living in affected areas who had “graduated” from the programme. This re-incorporation of former beneficiaries was deemed to be a cost-effective approach to horizontal expansion, as PROSPERA already had all the operational data of these households. In addition, the programme also incorporated households living in affected areas which had been identified as eligible but were not in the programme when the earthquake hit because of budget restrictions. (Beazley et al., forthcoming).
- In **Peru**, the social pension Pension 65 brought forward the achievement of annual coverage goals in response to the 2017 floods, incorporating eligible people living in the affected areas who were not in the programme before the shock. This did not entail incorporating households that were ineligible to receive the routine transfers (Beazley, 2018).

Less operationally challenging is the use of non-beneficiary data to inform post-disaster data collection efforts and responses (e.g. Post-Disaster Needs Assessments (PDNAs)). This is very different to using the registries to actually forecast or define the eligibility of households before or after a shock. Using existing data can make it possible to reduce the amount of new data to be collected, saving time and resources. In the Philippines, with the Listahanan database, and in Chile, in relation to the Registro Social, social registries are used to inform and complement post-disaster data collection (Bowen, 2015; Faundez, 2018). Nevertheless, little other evidence was found on this in the literature.

4.2.3 Leveraging existing capacity and information systems for recording new data on affected households

Depending on the scale of the shock and the coverage of beneficiary and non-beneficiary data (areas “A” and “B” in [Figure 2](#)), it is likely that additional data collection will be needed to complement existing data and to reach those for whom data are not available (area “C”). Additional data could also be required in order to capture changing household conditions (in areas a, b, and c).

Social assistance existing capacity and information systems can be leveraged for conducting PDNAs and other post-shock data collection strategies – supporting more timely and streamlined responses.

Governments managing social assistance programmes develop individual and organisational capacities to collect and manage data, which can be invaluable at a time of emergency, when the time, cost, and quality implications of training new staff can be problematic (e.g. challenges in Nepal are discussed in [Box 11](#)). There have been a few experiences of this type of leveraging, as discussed in [Box 10](#).

Box 10 Leveraging existing capacity and systems – experiences in Chile, Mexico, Ecuador, and Ethiopia

In **Chile**, the *Ficha Básica de Emergencia* (FIBE) is used to identify households affected by natural or man-made disasters. Information collected with FIBE supports decision making by the government on how to provide assistance to affected populations. In order to receive any kind of government assistance, households need to be registered with FIBE. The Ministry of Social Development (MSD) is in charge of managing FIBE's database and providing training and support to local administrations in terms of data collection. The MSD was selected to play this role, as opposed to the ministry with the DRM mandate, because of its experience and capacity in data management, and in particular the management of the country's social registry (the *Registro Social de Hogares* (RSH)) and broader information system – which is linked to FIBE data. There are several advantages to such an approach (Beazley et al., 2016, and Beazley et al., forthcoming; SSLF, 2018):

- The FIBE form can be kept very short (one page) and includes many “perception” indicators (e.g. “how badly affected was your house?”) as it is linked with data from RSH, enabling a comprehensive overview of household conditions.
- MSD already has interoperability agreements (including data security/privacy provisions) with other line ministries, government organisations and local authorities, enabling prompt and effective sharing of data.
- MSD is responsible for ongoing capacity building of enumerators within municipalities (leveraged for both routine social protection and for FIBE).
- MSD has invested in electronic data collection tools for emergency response.
- Data collected every time that FIBE is adopted (after a shock) is retained within the RSH, for analysis purposes and for informing decisions on future social protection caseloads.

Thanks to these efforts, while data collection for the 2014 Tarapacá Earthquake took 115 days, it took 27 days for the comparable 2015 Coquimbo Earthquake using the shortened (one-page) FICHE FIBE and “filling in” missing data through the RSH (SSLF, 2018). Since 2015, FIBE has been used in 1,000+ emergencies and over 4,100 public servants have been trained in all municipalities across the country. Moreover, the newly designed FIBE app reduced the time needed to gather the relevant data in the field by a further 50 percent (SSLF, 2018).

In **Mexico**, the capacity of the cash transfer programme PROSPERA at local level was leveraged to collect ex-novo data after the 2017 earthquake. The programme staff were in charge of registering the households affected by the shock (Beazley et al., forthcoming). This has also been the case in **Turkey** – see [Box 14](#)).

In **Ecuador**, the ministry in charge of non-contributory social protection (*Ministerio de Inclusión Económica y Social* (MIES)) registered the households affected by the 2016 earthquake. At the beginning of the crisis other government organisations were in charge of the data collection process (e.g. the statistics office) but after some operational challenges it was decided that MIES, due to its capacity at local level and experience with vulnerable households, should lead the process. In addition, the *Ministerio Coordinador de Desarrollo Social* was designated to manage the registry precisely because of its experience managing the integrated social registry (Beazley, 2017a).

In **Ethiopia**, PSNP's RFM enabled disbursement of funds to an additional caseload of 3.1 million beneficiaries (horizontal expansion) and extension of transfers to 6.5 million existing beneficiaries (vertical expansion) “six weeks after the request was made” in 2011, significantly faster than a parallel humanitarian appeal (Slater and Bhuvanendra, 2013). While the horizontal expansion did require a new wave of data collection and CBT, doing so within such a short time scale was only possible because of the existing processes and capacities in place (Pelham et al., 2011).

This can also work in the opposite direction: social assistance can use PDNAs or similar tools, both from government and humanitarian organisations, to inform its responses – piggybacking on external capacity. This requires some preparatory work in terms of identifying the type of information that social assistance needs and adapting the data collection tools accordingly, and also ensuring that registries can be shared and the necessary data and IT requirements are in place. This is an area that requires further research.

4.3 LONGER TERM: LEARNING FROM PREVIOUS RESPONSES AND BUILDING THE SOCIAL ASSISTANCE CASELOAD

In the longer term, either during the “recovery” phase or after, there is the potential for countries to draw lessons emerging from previous responses – generated through rigorous monitoring and evaluation, but also staff reflection – in order to ensure their systems are better able to flex and scale going forwards.

These efforts can be enhanced when they build on existing social assistance registries and broader information systems: for example, by using new data collected in the aftermath of a shock to inform routine social assistance programming. Across the countries analysed for this paper, examples of this have included the following:

- **Ensuring data on households affected by past disasters is compiled, retained, and linked to standard social assistance data – in support of future planning and programming.** In Chile, for example, the information extracted from FIBE across all previous shocks is systematically consolidated within a “FIBE database” and is linked to the social registry, affecting future eligibility decisions, among other aspects (Box 10).
- **Ensuring experiences/learning on collecting and managing data for shock response by international humanitarian actors (e.g. via shadow alignment) are shared with governments and data fed back into national systems.** For example, this is the case in Yemen and Jordan.
- **Directly incorporating the new caseload into standard social assistance provision.** In the Philippines, the cash transfer programme Pantawid increased its coverage by 20,000, incorporating chronically poor households affected by Typhoon Yolanda (Bowen, 2015). In Lesotho, 3,500 households of the 6,800 who received the CGP on a temporary basis were incorporated as regular beneficiaries (Kardan et al., 2017). In Latin America, many “temporary” expansions became permanent in the aftermath of the 2008 global financial crisis (Beazley et al., 2016).
- **Expanding social assistance coverage in shock-affected areas.** For example, in Ethiopia, the expansion strategy of the PSNP is directly linked to previous receipt of shock assistance. For example, as defined in the 2014 manual, new *woredas* (districts) are added every five years if they have received shock relief assistance in three of the five years preceding, while new *kebeles* (wards) are added if they have been in receipt of recurrent food assistance for at least three of the past five years.

5 WHEN MIGHT USING EXISTING SOCIAL ASSISTANCE DATA AND INFORMATION SYSTEMS BE MOST APPROPRIATE?

The previous section analysed the potential uses of existing data and information systems, providing practical examples of where these have been put into practice in a wide variety of countries. However, this analysis alone does not make clear the potential benefits, risks, and trade-offs of using pre-positioned data and information systems versus “starting from scratch”. In order to do this we build on the criteria offered within O’Brien et al. (2018b), asking: to what extent does leveraging existing data and information systems ensure timeliness, eliminate duplicated delivery systems and processes (affecting costs), ensure better coverage of population and needs, and ensure increased predictability and sustainability? Below, we briefly discuss each point, focusing on the areas for which most evidence is available, and stressing the most important trade-offs between these.

5.1 TIMELINESS

Existing data and information systems have the potential to improve the timely identification of individuals for assistance – whether they are used to enhance preparedness, linked to EWS through automatic triggers, or somehow used to scale up the provision of assistance (as discussed in [Section 4](#) above). This can lead to timely support if information is acted on promptly – for example, if financing is promptly available for expansion.



For vertical expansions (or programmes piggybacking on beneficiary data), timeliness can be easier to guarantee than for horizontal expansions – as by definition no additional data collection needs to be performed to inform targeting (though there are exceptions, discussed below). This is apparent in countries where both vertical and horizontal expansions have been conducted:

- In Dominica, the vertical expansion of the Public Assistance Programme (PAP) in the aftermath of Cyclone Maria disbursed payments a full month before the “Emergency Cash Transfer” horizontal expansion, which selected the additional caseload on the basis of a Vulnerability Needs Assessment (WFP, 2018; Beazley, forthcoming).
- In Nepal, the Phase 1 vertical expansion of the country’s existing social assistance cash transfer programme²⁸ (known as the Emergency Cash Transfer Programme (ECTP)) disbursed payments just under a year before the horizontal expansion (by design, yet for practical reasons) – see [Box 11](#) for details.

Box 11 Vertical and horizontal expansion in Nepal, chronology of a response

On 25 April and again on 12 May 2015, **Nepal** was affected by two major earthquakes. Amongst other forms of response, the Government of Nepal partnered with the UN Children’s Fund (UNICEF) to provide the ECTP to households in affected areas. The ECTP was delivered over two phases: Phase 1 was part of the emergency response and Phase 2 was part of the recovery response. Phase 1 of the programme

²⁸ This is a programme paid to members of five vulnerable groups.

provided a top-up grant to the beneficiaries of the existing Government of Nepal cash transfers to five vulnerable groups (namely Dalit children under five years of age, widows and single women, persons with disabilities, senior citizens, and members of minority ethnic groups) in 19 earthquake-affected districts. The second phase of the programme comprised a horizontal expansion of the programme, providing cash transfers to all children under five years of age in 11 of the 14 most earthquake-affected districts.

The choice to start **Phase 1** with a vertical expansion was a practical one: to transfer funds to households using available systems rather than collecting new data and delaying the response. Planning for Phase 1 started immediately after the first earthquake and the programme was internally approved by UNICEF on 19 May. However, valuable time in the first phase of the crisis was lost in Cabinet-level decision-making processes on the geographical coverage of the programme, which lasted for about a month. Fund transfers began in June, and payments were made from 09 July, with most beneficiaries having received their payments by October 2015, five months after the first earthquake. Overall, payments were delayed because: a) the standard payment window for government payments was missed in June; and b) there were delays in transferring funds to local levels of administration and to Village Development Committees (who were also overburdened with work).

The timeline for **Phase 2** was primarily affected by its design, which was focused on the recovery phase, once Phase 1 was completed. Planning for Phase 2 was conducted in September 2015 and the Government of Nepal's approval was finalised by January 2016. An enumerator training for the horizontal expansion registry was conducted between late February and early April 2016, with data collection completed by the end of May and data entry by the end of July. District-level orientation sessions for staff from districts and municipalities were also held in March/April 2016, enabling disbursements to start in June through to October 2016. Nevertheless, problems with data quality due to insufficiently trained enumerators and data entry resulted in beneficiary lists that were often incomplete or inaccurate, creating tensions within communities and necessitating a re-registration exercise.

Source: Merttens et al., 2017.

Yet, beyond the data, emerging experiences are showing that determining factors for a timely vertical response are timely decision making and preparedness to promptly disburse funds (and, conversely, that delays are linked to a lack of preparedness). Box 12 exemplifies this. Overall, it is clear that vertical expansions are not necessarily faster than standalone emergency responses – for example, if a government's disbursement rules/procedures cause delays compared with an NGO implementing through its own budget.

Box 12 Leveraging beneficiary data – experiences in the Philippines, Fiji, Tonga, Peru, and Lesotho

In the **Philippines**, the cash transfer programme, Pantawid, was expanded vertically twice in response to the Typhoon Haiyan: first, immediately after the typhoon and with WFP's support, and, secondly, during the recovery phase, with UNICEF support. The vertical expansion "allowed a means to reach affected people with emergency cash assistance, at a speed and scale impossible through traditional humanitarian channels" (Smith et al., 2017).

In **Fiji**, timely disbursement within less than a month of Cyclone Winston in February 2016 was possible thanks to preparedness measures set in place in the aftermath of Cyclone Evan in 2012. The cash top-up payments were provided to all existing beneficiaries of the Poverty Benefit Programme, Social Pension Programme, and the Care and Protection Programme, irrespective of whether they resided in the affected areas or not (Mansur et al., 2018).

In **Tonga**, a vertical expansion of two social assistance schemes was made within four weeks of cyclone Gita in 2018. The cash payments were disbursed just five days after the Australian and Tongan governments agreed to the intervention. This was possible thanks to the use of existing payment systems, but also due to an existing budget support mechanism between the two countries, which was used to reimburse the Government of Tonga.

In **Peru**, the government provided top-ups to beneficiaries of the cash transfer programmes *Pension 65* and *Juntos* living in the areas affected by the 2017 floods. However, this type of response did not make it possible to respond quickly. Due to lack of preparedness regarding the vertical expansion of social protection programmes and a slow decision-making process during the aftermath, the top-ups were transferred approximately five months after the peak of the floods (Beazley, 2018).

In **Lesotho**, “the fact that the mechanism for the top-up was designed at the time of the crisis—not an integral part of the Child Grant Program—meant that it was slow to start and disburse, and had to hunt for funds”. The programme “only started providing top-ups in June 2016, six months after the declaration of the drought emergency” (Kardan et al., 2017).

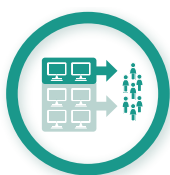
Moreover, in some cases, additional data collection/beneficiary contact may be needed for vertical expansions as well, affecting timeliness. This could be the case in the following circumstances:

- Where vertical expansion is not intended for all beneficiaries in affected areas (vulnerability and needs require further assessment). This is rarely the case, however, especially when the scale of the disaster is such that most households need support anyway. This was the case in the Philippines and Nepal, for example, where timeliness was prioritised over potential inclusion errors (see also [Section 5.2.1](#)).
- Where existing data require revalidation (e.g. in cases of displacement and/or loss of documentation, payment cards, etc.). This was the case in the Philippines ([Box 13](#)).

Box 13 Revalidation exercise for a vertical expansion, Philippines experience

Following Typhoon Haiyan, the scale of the disaster led to massive displacement of Pantawid beneficiary households and to the deaths of some parents or caregivers. A revalidation exercise was needed in order for the Department of Social Welfare to track down displaced households and record any changes. Social welfare officers were tasked with this exercise and conducted outreach activities to camps and neighbouring barangays. The quick decision to undertake this exercise, and effective systems to execute it, proved instrumental to the effective implementation of the emergency cash transfer. It took over three weeks and was highly intensive for the Department of Social Welfare’s municipal and provincial staff. Staff from outside the affected area were drafted in to assist, which was an enabling factor. Members of the programme’s parents’ clubs assisted in tracking down and informing households. The programme MIS was also updated accordingly.

Source: Smith et al. (2017)



As discussed in [Section 4.2](#) above, for horizontal expansions and standalone emergency responses that piggyback on non-beneficiary data, a more timely response can be ensured via the following:

- *Using existing data to target or inform horizontal expansions.* This has been pioneered by the HSNP in Kenya. However, this is a model that has not been fully replicated in other countries and that is primarily relevant for areas affected by recurrent shocks (see [Section 4.2.2](#) and [Box 9](#)).
- *Building on existing social protection information systems, data collection approaches, and capacity.* This is the case in Chile and Ethiopia (see also [Section 4.2.3](#) and [Box 10](#)).
- *Leveraging data collection technology* so as to reduce further delays for data entry and reduce issues with data quality. For example, in Chile ([Box 10](#)).

Timely horizontal expansions can also potentially be enhanced via on-demand data collection approaches, enabling those who are affected/in need to enrol on an ongoing basis. However, such a process can be labour intensive and difficult to maintain in the aftermath of disasters or conflict. Moreover, the specific constraints of on-demand systems, in terms of direct, indirect, and opportunity costs for applicants

(Barca, 2017) are often exacerbated in the aftermath of a crisis: e.g. having to travel to registration points, queueing, and having to provide qualifying documents. There are ways to address these, of course (waiving/simplifying certain requirements, mobilising local desks, covering transport costs, etc – as exemplified in [Box 14](#)), but all in all on-demand registration systems have primarily been used for horizontal expansions in the contexts of slow-onset shocks and/or economic crises (O’Brien et al., 2018).

Box 14 Temporary changes to on-demand systems in Turkey and Kyrgyzstan

In **Turkey** refugees were enrolled in the ESSN programme through the country’s existing information management platform, ISAS, and capacity (local social welfare offices) – with some modifications to the standard process. For example, the protocols of the routine social assistance system dictate that eligibility is based on a range of socioeconomic criteria (sourced from existing government databases) and information provided by applicants during on-demand registration at local social welfare offices. This information is verified through home visits by staff. When social assistance was expanded to include refugees within the ESSN, there was a lack of verifiable socioeconomic data on refugees and also a need for rapid scale-up. It was agreed by government that the eligibility criteria for inclusion in the ESSN programme would be limited to six demographic indicators. During registration, refugee applicants were only required to complete their basic information and 19 of the 49 questions in the application form. It was also agreed that refugee beneficiary households would receive a visit within one year of enrolment in the programme, rather than as a pre-requisite before eligibility decisions could be made. Moreover, complementary “handholding” was provided by humanitarian actors, such as NGOs, funded by international donors, providing transport or covering the cost of transport to take applicants to apply within social welfare offices (Smith, 2017a)

In **Kyrgyzstan**, following conflict, the government signed a Temporary Regulation which relaxed the registration requirements on the two social transfer programmes for six months in the two affected provinces. Under this regulation, ad hoc local social commissions were established, to rapidly assess on-demand applications from households, without needing a household visit. Moreover, the process for registration in emergency programmes meant that families had to apply in the social welfare offices at district level, often a good distance (over 100km) from their residence. UNICEF thus supported the government to set up mobile outreach services (recruiting and training both Uzbek-speaking and Kyrgyz-speaking social workers to address language and ethnic barriers), to take registration to communities, making it more accessible for the poorest. This speeded up the enrolment of those made vulnerable and impoverished by the crisis, and also identified those who were erroneously excluded from existing programmes Smith (2017b).

Overall, an assessment of recent case studies of vertical and horizontal expansions of routine government programmes shows there is wide variation in the level of timeliness achieved by each response – and a wide variety of reasons for timely or delayed response, most often linked to design, approval, and financing processes (see [Table 5](#)). Some of these can be smoothed ex-ante to improve the likelihood of timely responses, via preparedness measures such as contingency planning.

Table 4 Timeliness of response among selected case studies

Country	Response type	Year and shock type	Time lapse from shock list to first “payment”	Comments (e.g. reason for delay/timely response)
Philippines	Vertical expansion	2013 (cyclone)	1-2 months	Revalidation exercise took 3 weeks
Nepal	Vertical expansion	2015 (earthquake)	2-6 months, depending on district ²⁹	Funding approval

²⁹ 99 percent of beneficiaries were reached by November 2015; the first earthquake had hit on 25 April that year.

Country	Response type	Year and shock type	Time lapse from shock list to first “payment”	Comments (e.g. reason for delay/timely response)
Nepal	Horizontal expansion	2015 (earthquake)	14 months	Government approval by multiple ministries; enumerator training; data collection; programme orientation at community level
Kenya (HSNP)	Horizontal expansion	2015, 2016 (drought)	2 weeks	Automatic trigger; pre-enrolment of caseload; standard operating procedures
Fiji	Vertical expansion	2016 (cyclone)	1 month	Government decision and reallocation of budgeted resources from lower-priority expenditures
Ecuador	Horizontal expansion	2016 (earthquake)	2-4 months	Programme design, enumerator identification and training, data collection (initially paper-based)
Dominica	Vertical expansion	2017 (cyclone)	2.5 months	Data from existing programme inadequate for immediate use
Dominica	Horizontal expansion	2017 (cyclone)	3.5 months	Enumerator training; paper-based data collection
Tonga	Vertical expansion	2018 (cyclone)	1 month	Existing financial arrangements for budget support between DFAT and the government

Source: Authors, based on selected country case studies cited in this report (non-representative sample as all natural hazards).

5.2 ENSURING COVERAGE OF POPULATION AND NEEDS

5.2.1 Coverage: inclusion and exclusion errors

In those cases where existing social assistance data are used to respond to disasters there is an obvious implication in terms of exclusion and inclusion errors. Data collected before a shock will never give an exact assessment of needs in the aftermath of a shock (even when the eligibility criteria are altered or where better data are collected beforehand), and beneficiaries of existing programmes are not necessarily those who are most in need (McCord, 2013; Bastagli, 2014; O’Brien et al., 2018). As discussed extensively throughout this report, the following specific observations can be made:

- **Vertical expansion** (or **piggybacking** on programme beneficiary lists) “is only ever, at best, a partial solution as the disaster-affected population is extremely unlikely to map exactly onto the programme’s beneficiary list”, meaning there is a “need for multiple programmes providing response alongside a vertically expanded social protection programme” (O’Brien et al., 2018). This has been the case in many of the examples discussed in this study – and this can be carried out through other social protection programmes, or through the DRM and humanitarian sectors in a complementary fashion. For example, in the Philippines, both WFP and UNICEF provided support to non-Pantawid households, in complement to the Pantawid top-up through government systems.
- **Horizontal expansion** to new households based on pre-positioned social protection data (or piggybacking on that data for a response) can be useful in the short term if and when it guarantees a

timely response, but needs to be complemented by additional data collection in order to truly reflect household conditions in the aftermath of a shock, and avoid inclusion and exclusion errors.

The most pressing and important trade-off that needs to be discussed and evaluated by decision makers in advance of a shock is therefore the one between inclusion/exclusion errors and timeliness. The question to be asked is: given the existing country context (including the features of existing social protection data, presented in [Section 3](#)), what is the true cost of delaying a response for the sake of improved targeting accuracy?

The literature on the topic speaks clearly: overall, when it comes to crisis response, timeliness is usually more important than full targeting accuracy, especially in the first phase of assistance (Pelham et al., 2011; Beazley et al., forthcoming; Hallegatte et al., 2017). Specifically, inclusion errors can and should be tolerated in the short term – especially as they can contribute to controlling tensions within recipient communities. Exclusion errors, on the other hand, should be minimised by design, and promptly addressed through a sound grievance redress process and complementary approaches designed to swiftly reach all affected households (Pelham et al., 2011; Hallegatte et al., 2017). The true question for policymakers is whether responding via existing social protection systems is the best way to balance this trade-off – as it may not be.

5.2.2 Meeting needs: type/amount of support

This report has not touched on this dimension, due to a lack of adequate documentation in the literature. It should be noted, however, that existing social assistance data can play a role in informing design choices for shock response (e.g. on the type and amount of support that is most likely to meet needs, see [Section 4.1.2](#)). On the other hand, vertically or horizontally expanding existing programmes only by using existing data can lead to the provision of support that is inappropriate for crisis needs.

5.3 REDUCED DUPLICATION OF EFFORTS/SYSTEMS, AND REDUCED COSTS

There is a potential value in leveraging shared data for increased coordination amongst social protection, DRM, and humanitarian actors, leading to improved knowledge/learning, reduced duplication of efforts, and potentially saving costs (e.g. administrative costs of data collection, recurring costs of data management, and private costs to citizens, Pelham et al. (2011)).

There is some evidence of such benefits, as previously discussed in [Section 4.2.3](#) and [Section 4.3, Box 10](#) and [Box 14](#).

Recently, two experiments in Pakistan and Malawi were set up to explicitly assess the cost-effectiveness of leveraging pre-positioned data, versus new data collection efforts in the aftermath of a shock. Both found some clear advantages, but also several areas that would need addressing ex-ante to make the pilots scalable, as summarised in [Box 8](#). Overall, it should be stressed that the value added appears to be in leveraging the data themselves, not necessarily the underlying targeting approach adopted by individual programmes.

5.4 ENSURING PREDICTABILITY AND SUSTAINABILITY

Not enough insights were offered within the existing literature on these two topics either. However, it could be argued that using existing data, information systems, and capacity can positively affect both the predictability and sustainability of shock responses.

6 CONCLUSIONS AND RECOMMENDATIONS

Over the course of this paper we have shown that social assistance data for routine long-term programming – and the broader capacities and information systems that underpin it – can help countries to better prepare and respond to shocks (conditional to the caveats below). Social assistance data on households and individuals, when used alongside a wider range of data sources generated by other government and external actors, can support the decision-making process around shocks, making it possible to better answer fundamental questions on who, where, when, what, and how assistance can be provided to those affected or potentially at risk.

Specifically, building on existing data, information systems and related capacities has the potential to:

- enable **better planning and preparedness** for shocks by supporting the identification of vulnerable households and the estimation of potential caseloads. Efforts to collect operationally relevant data and expand registries in vulnerable areas can support this function further;
- enable a more **timely response**, by linking to systems for early warning via pre-agreed triggers and/or leveraging existing data and capacities;
- support processes for registering, selecting, and enrolling beneficiaries (“targeting”), **reducing the duplication of efforts** and enhancing the cost-effectiveness of responses; and
- ensure **learning** and new data generated via the shock response informs government capacity and programming decisions (e.g. expansion of caseloads), enhancing longer-term sustainability.

Nevertheless, the extent to which these benefits can truly be reaped depend on the following:

- **Factors that go far beyond the realm of data and information management** – which need to be better factored in within broader “preparedness” measures. For example, we have seen that timely delivery for vertical expansions is often delayed because of lack of funding³⁰ or swift decision making and approvals, rather than lack of data (Table 4). Similarly, enhanced planning and learning will only materialise where robust systems for M&E and use of information are in place.
- **The practical set-up of the registry and information system in question** (see Box 1 and Section 3), which ultimately affect its coverage, relevance, currency, accessibility, accuracy/usability and level of protection. We summarise this in Figure 4. For example, there are important distinctions to be made between registries that only store data on current beneficiaries and those that store data on potential beneficiaries too; between registries that are updated continuously or periodically; and between registries that collect limited socio-demographic data vs those that collect a broader set of indicators than can be used to assess vulnerability to shocks. Overall, there is wide variation across countries on all these dimensions, with most examples discussed in Section 4 from middle and not low-income countries – where integrated social protection information systems are more developed.
- **The type of approach to shock response.** Each option has very different implications, and there are major variations within each option that need careful assessment (see Table 5).

³⁰ Noting this is an issue that can be addressed via better use of data – e.g. for forecasting needs.

- **Vertical expansions** and programmes “**piggybacking’ on beneficiary data**” require very little additional efforts (e.g. in terms of adapting processes) and can therefore enable timely responses if adequately planned in advance. However, they present significant drawbacks in terms of the coverage of affected populations, which need explicit addressing.
- **Horizontal expansions** (via existing or new “**piggybacked’ programmes**”), on the other hand, inherently involve more complex processes and political decisions. Moreover, few countries have developed social registries with the characteristics needed for these to be truly useful in response to shocks (e.g. sufficient coverage). This does not mean such a strategy is not possible, it simply means it requires more planning – including a careful assessment of the various options available for leveraging routine data and systems (Table 5).

It is unsurprising that most examples of expansions to date have been vertical expansions, or horizontal expansions where little or no use has been made of existing data on non-beneficiaries – except where explicitly planned (Kenya HSNP), or where used as a basis to inform and provide capacities for *ex-post* data collection.

- **The type of shock.** Table 6 summarises some core considerations along different variations in shock characteristics emerging from this research.

Table 5 Options for using existing data and systems in a shock to support targeting after a shock

Using data on beneficiaries (for vertical expansions of existing programmes or new programmes piggybacking on beneficiary data)		
Option	Implication	Example
Target <i>all</i> beneficiaries nationally	This can be an effective last-resort strategy to ensure a timely response if there are no trustworthy data on the geo-location of households and if the shock has had wide effects across the country. This will likely lead to (large) inclusion and exclusion* errors by design.	Fiji
Target <i>all</i> beneficiaries within the affected geographical area	This can be pragmatic and can improve timeliness in severe shocks where most households are likely to have been affected. This will likely lead to inclusion and exclusion* errors by design.	Philippines
Target <i>some</i> beneficiaries	For less severe crises, or where there is variation in impact, the beneficiary list can be used as a starting point from which household vulnerability is verified. This will likely lead to exclusion* errors by design.	None
Target <i>no</i> beneficiaries	Beneficiary households can be de-prioritised on the grounds that they already receive some help. This can lead to exclusion* errors by design and needs to be assessed in light of different transfer values offered by humanitarian actors vs routine social assistance.	Mozambique

Using data on non-beneficiaries, e.g. within social registries (for horizontal expansions of existing programmes or new programmes or new programmes piggybacking on non-beneficiary data)		
Option	Implication	Example
Use variables to target all non-beneficiaries within the affected geographical area	Especially in the first response phase, the most timely option for providing assistance to an expanded caseload is to target everyone living in affected areas. This will likely lead to high inclusion errors, as well as exclusion* errors by design. It also can be complex to implement if non-beneficiary households have only been registered but not enrolled.	Mexico
Use variables to further target vulnerable households (within affected areas)	If the criteria, and the circumstances in which they would be used, are planned in advance, such an approach would effectively pre-identify a cohort of households for assistance, enabling immediate targeting in a disaster. This may lead to some inclusion and exclusion* errors by design. Pre-enrolment (e.g. collecting operationally relevant data at registration stage) might also be possible as part of preparedness planning, and might enable a timely response in the manner of “no regrets”.	Kenya
Use variables as a starting point to inform data collection	The use of an existing registry and information system as a starting point might enable a more rapid data collection process than collecting all information from scratch. A further screening would be applied after the shock in order to identify which households have been worst affected. This would minimise inclusion and exclusion errors by design, but would compromise timeliness.	Chile
Leveraging existing capacity and systems to support data collection	Even where existing data are not used (e.g. because they are not available or not relevant), the data collection capacity and the IT platforms/software of routine social protection information systems can be leveraged to ensure timely and high-quality data collection. This option may be particularly relevant for systems with on-demand approaches to data collection.	Turkey

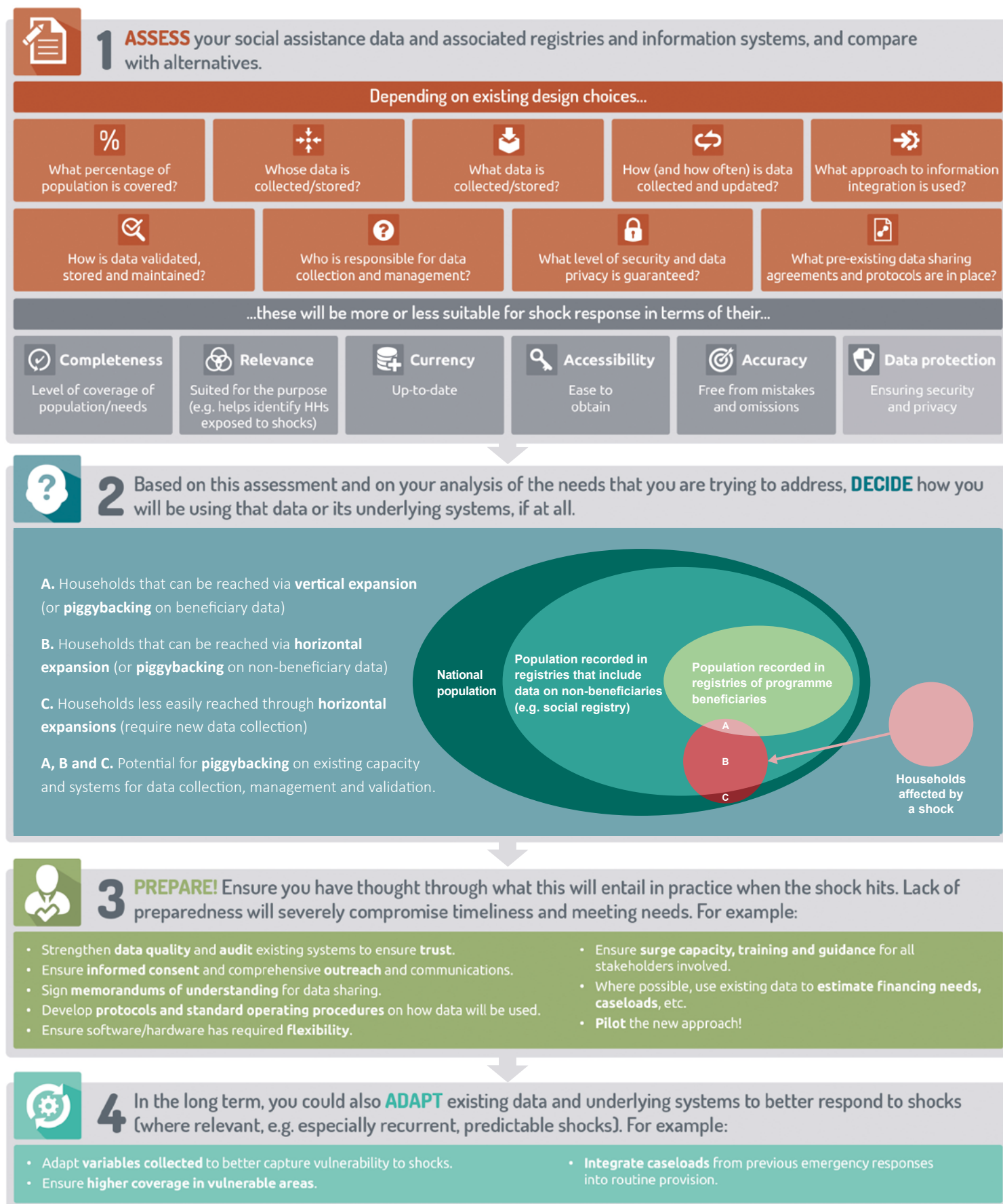
Source: Authors, on the basis of O’Brien et al. (2018b), Barca and O’Brien (2017), Beazley et al. (forthcoming) Unless complementary efforts are made to reach all affected households.

Table 6 Considerations across different variations in shock characteristics

	Shock characteristics	Potential implications for the use of existing data and information systems
Onset	Rapid onset	<ul style="list-style-type: none"> • Likely to also affect the non-poor (often not included in existing registries) • May cause widespread displacement and splitting-up of households (need for revalidation exercise) • Likely to significantly affect household material circumstances/assets • Potential for data loss and more complex access
	Slow onset	<ul style="list-style-type: none"> • Socioeconomic data more relevant, partly as potentially more overlap between chronic poverty and vulnerability • Trigger for response can be less obvious, leading to delay – EWS most relevant
Recurrence (also linked to predictability)	Recurrent	<ul style="list-style-type: none"> • Socioeconomic data more relevant, partly as potentially more overlap between chronic poverty and vulnerability • Worth investing in expanded coverage of existing registries in affected areas • Preparedness measures can be particularly cost-effective
	Occasional	<ul style="list-style-type: none"> • <i>Inverse to considerations above</i>
Size	Large (majority of country affected)	<ul style="list-style-type: none"> • Likely to widely affect the non-poor (often not included in existing registries) • Ad hoc data collection for shock response less feasible (capacity constraints, etc) • Risk of inclusion errors less critical: higher potential for use of data from social registry for timely response
	Medium-small	<ul style="list-style-type: none"> • Ad hoc data collection for shock response more feasible
Types of shock	Economic	<ul style="list-style-type: none"> • Likely to widely affect the non-poor (often not included in existing registries) • Socioeconomic data may be more relevant than, for example, demographic
	Natural hazard	<ul style="list-style-type: none"> • Likely to also affect the non-poor (often not included in existing registries) • EWS triggers mostly developed for natural hazards • Potential to conduct “climate-smart targeting” for existing programmes
	Conflict	<ul style="list-style-type: none"> • Likely to widely affect the non-poor (often not included in existing registries) • May cause widespread displacement and splitting-up of households (need for revalidation exercise) • Likely to significantly affect household material circumstances/assets • Access to existing data more complex (partly due to lack of trust and potential collapse of underlying Social Protection system) • Potential security concerns • No data on refugees and non-citizens within existing systems
	Pandemic	<ul style="list-style-type: none"> • Likely to widely affect the non-poor (often not included in existing registries)

Source: Authors

Figure 4 Design choices for social assistance data collection, storage, and management that affect data quality



Source: adapted from Barca and O'Brien (2017)

Moreover, leveraging existing data and capacities also leads to important risks and subsequent policy trade-offs, which need to ideally be tackled in advance of shock. The most notable include:

- **Inclusion/exclusion vs timeliness.** Using pre-positioned data for targeting in the aftermath of a shock can potentially improve timeliness but can also lead to significant targeting errors. The literature on the topic is clear: when it comes to crisis response, timeliness is usually more important than full targeting accuracy, especially in the first phase of assistance. Specifically, inclusion errors can and should be tolerated in the short term – especially as they can contribute to controlling tensions within recipient communities. Exclusion errors, on the other hand, should be minimised by design, and promptly addressed through a sound grievance redress process and complementary approaches to swiftly reach all affected households. The true question for policymakers is whether responding via existing social protection systems is the best way to balance this trade-off – as it may not be.
- **Data security and privacy vs accessibility.** Responses that build on existing data and systems should not compromise the data security and privacy of registered individuals and households, placing households at risk of increased vulnerability – and potentially compromising humanitarian principles. Better approaches to data collection, management, and sharing – and agreements developed in advance of a shock – can help to minimise risks while ensuring accessibility of valuable data.

Our core conclusion is that – before using existing data and information systems at any cost – it will be essential for every country to carefully assess existing data and systems to assess “data quality” (completeness, relevance, currency, accessibility, accuracy – and data protection). [Table 7](#) presents key questions that can be used in this process (O’Brien et al., 2018c). An important subsequent activity will be to assess the capacity implications of any given choice.

It will also be important to consider whether these aspects can be strengthened through adjustments to the way data are collected, stored, and managed. This research stresses the importance of investing in preparatory measures leading to better data quality, which are based on a strong policy vision. As discussed extensively, it is not only the data that can play an important role, but also the broader capacities to collect, store, manage, and share that data – as well as the underlying information systems and institutional agreements for data sharing. Building each of these ex-ante with an eye to their potential role ex-post will be an essential preparedness step for countries building more adaptive social protection systems. [Box 15](#) provides some examples, focusing on social protection data and systems alone. These will not all be relevant in all contexts – but will be an important starting point.

Box 15 Emerging recommendations for preparedness

To enhance **broad preparedness**:

- Focus on using data for planning purposes (better understanding gaps in provision, household vulnerabilities, financing needs, etc) and not just supporting *ex-post* targeting.
- Develop a strategy for how to use existing systems so as to avoid social protection beneficiaries either receiving multiple benefits from different actors, or being excluded
- Develop clear guidance and protocols on the use of existing data and systems in emergency contexts and ensure extensive capacity building/training on these, across all stakeholders at all levels of implementation
- Ensure flexibility in the design of the information system, e.g. ensuring the application software can process new caseloads if needed, etc.

To enhance the **coverage** of affected populations:

- Pre-emptively **mapping coverage** of existing social protection registries can be an important step in order to realistically assess the trade-off of using existing data vs collecting new data in the aftermath of a crisis. This would include: a) where possible, mapping programme registries against each other (e.g. integrating them into an Integrated Beneficiary Registry using unique ID or other) to assess overlaps between and the potential of each and every registry (not just flagship programme); and b)

mapping against other potential data sources (e.g. ID database, civil registry, municipal records, etc), including considerations on relevance (see [Section 3.2](#)).

- Countries should consider investing in expanding coverage of existing registries in disaster-prone areas (e.g. up to 100 percent of population), especially in contexts where shocks are recurrent (e.g. droughts, floods, cyclones). However, this can be expensive, with limited evidence to date on the cost-effectiveness of such an approach. Moreover, it will be essential to be mindful of communication issues, in order not to raise expectations.
- It is important to realise that when giving top-ups to regular beneficiaries (vertical expansion), there is still need for a system for reaching other affected households.

To enhance the **relevance** of existing social assistance data:

- Preparedness for a crisis can include assessing the extent to which the categories targeted by existing social protection programmes **overlap** with the categories that are most vulnerable to risks (including coverage of these populations in disaster-prone areas, see [Section 3.1](#)) and acknowledging that income and asset poverty is just one—and not the only—dimension of vulnerability. Importantly, the overlap may differ for different types of shocks: e.g. in slow-onset drought prone areas, chronic poverty may be strongly correlated with vulnerability to drought, while a similar relationship is less obvious for conflict.
- Countries wishing to swiftly roll out horizontal expansion or piggybacking approaches based on existing registries should consider the **costs and benefits of collecting operationally relevant information** for all registered households, not just those that are enrolled. For Kenya's HSNP, for example, this has meant not only collecting additional data, but also pre-emptively opening bank accounts and providing payment cards to all registered households – including those that were not eligible for HSNP standard payments.

To enhance **data currency**

- An **assessment of data currency** will be essential as part of preparedness efforts.
- Strategies to improve the currency of social protection data can include the following:
 - Considering **on-demand data collection** approaches, to complement periodic census-survey efforts – where adequate capacity is in place to do so
 - Updating data through **integration of data from other sources**. This can be done: a) from local to central level, allowing municipalities/lower implementation levels to update information whenever they are notified of changes (needs some level of control as this poses a risk); b) from other administrative registries such as the civil registry, which can be used to update information on household births and deaths; c) directly from citizens, online or on mobile apps (e.g. in Chile and Australia).
- Acknowledging some form of **revalidation exercise** post-emergency will often be needed, to reflect changing household conditions (e.g. to track down displaced households and those with no ID, to replace named carers for newly orphaned children, etc). For example, this took three weeks in the aftermath of Typhoon Haiyan in the Philippines.

To enhance **accessibility**, while ensuring **data protection**:

- Prepositioning data will require ensuring **protocols and agreements** (e.g. memoranda of understanding) are in place to enable timely sharing of data.
- In considering data sharing with third-party actors, it will be essential to adhere to **international data transfer and information privacy protocols**, which legislate the collection, transfer, and storage of information (see Barca, 2017), so as to ensure the integrity of data and confidentiality.
- To ensure an effective response it will be important to ensure information from existing registries is available at **local levels** countrywide, with staff trained and able to access it.

Source: Authors, based on Barca and O'Brien (2017)

Table 7 Six dimensions by which to assess if a social assistance registry can be useful for shock response

Dimension	What to look for when considering their use
Relevance: Does it contain the right variables?	<ul style="list-style-type: none"> • Are the indicators that determine eligibility of households for routine social protection programmes suitable for identifying households that are vulnerable to disasters? Note that this will vary depending on the underlying approach to targeting, partly as different programmes have different data requirements. It will also depend on the type of shock and its impact. • Does the registry contain any data on climatic vulnerability? Information on dietary diversity (etc) changes too quickly to be of use except at the moment of collection – this will always need to be collected at the time of the shock. • Are data on non-beneficiaries adequately stored and maintained? If so, do they include operationally relevant information: recipient details, full address, GIS reference, contact number, bank account number, biometric data, etc?
Completeness: Does it contain data on all people/households in the affected area or in need?	<ul style="list-style-type: none"> • What percentage of the population is covered within existing registries – nationally and in affected areas? A registry will be best placed to assist an emergency response if a large proportion of the population in affected areas, or a large proportion of those in need (e.g. exposed and vulnerable to risks), is included. Of course, this can also be achieved via the use of several registries. <ul style="list-style-type: none"> — Do beneficiary registries only cover a subset of the population in any given area (e.g. the “poor”, older people, children, etc.)? Who? Are they also targeted geographically? How? — Is there a social registry serving several social protection programmes? Who is excluded from it and why? — What other registries created for uses other than non-contributory social protection are available (including, potentially, a country’s contributory social protection databases, national ID database or its civil registry)?
Data currency: Is the information up to date?	<ul style="list-style-type: none"> • To what extent do the data reflect households’ circumstances at the required point in time? It is difficult for standard social protection data to reflect the reality after a disaster, meaning some post-disaster revalidation is always required. • How out of date are the data and why? For example, does data collection take the form of a mass “census survey” every few years or continual on-demand registration by individuals or households? Who updates the information and how are updates shared? (Note: beneficiary registries tend to be more up to date than registries containing potential beneficiaries, as beneficiary data are used and updated on an ongoing basis). • To what extent is household well-being affected by the shock? For example, conflict and many natural shocks may cause widespread internal displacement, split up households, and significantly change their material circumstances.
Accessibility: Can the information be accessed by the people who need it?	<ul style="list-style-type: none"> • Who are the users (e.g. national government versus decentralised government versus non-government agencies) and what protocols and authorisation levels are in place for data sharing with each of them? • Are data maintained and stored digitally? What type of data interface (e.g. web service) is used for sharing data? What provisions are there for data security and privacy? • What capacity and infrastructure is there in terms of (i) human resources to use the registry, (ii) availability of computers, and (iii) availability of electricity and a network connection?
Accuracy: Is it free of errors?	<ul style="list-style-type: none"> • Are the data free from mistakes and omissions (to the extent possible)?– This affects the confidence that can be placed in the data, its wider credibility, and ultimately its usability. Perceived accuracy also depends on where data are housed and who has oversight over the data’s quality.
Privacy/security	<ul style="list-style-type: none"> • Can the information be used for shock response without compromising data security and privacy? Is there a legal basis for such use?

Source: O’Brien et al. (2018b), based on O’Brien et al. (2018) and Barca and O’Brien (2017).

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