3. BRIEF OVERVIEW OF COUNTRY PROGRESS

As mentioned in the introduction, an ever-increasing number of low- and middle-income countries worldwide have been striving towards integration of data and information management within the social protection field in recent years. Moreover, given the evolving nature of these experiences — which are tailored to a country's needs and priorities in any given moment — it is important to provide some form of mapping of solutions to integration to date.

This section briefly reviews key features of country experiences (Table 7 summarises information for a selected list), exploring why these differ so much and proposing a framework to analyse 'trajectories' of integration. Further country-specific information is provided in Section 4 below, which discusses the main steps and challenges of designing and implementing social registries in particular.

3.1 Comparing progress across countries

Support for integrated data and information management for social protection has grown considerably in the last 20 years especially. The early wave goes back to the late 70s and early 80s, when Chile and South Africa were starting to set up their systems (see Box 7 for South Africa's legacy system). Following some further experiences in Costa Rica and Argentina, since the turn of the century this process has notably accelerated — in Latin America primarily and then expanding internationally. For example, Brazil started the set-up of its systems in 2001, Uruguay in 2006, Malaysia in 2007, the Philippines in 2009, Turkey in 2010 and Indonesia and Kenya in 2011. Each of these countries — as well as many others not listed here — has gone through several iterations during the course of this process, adjusting its system depending on the constraints and opportunities it was facing at that point in time, and on the overarching policy objectives pursued. For example, Brazil's Cadastro Único has gone through almost 20 updates of its registry software and set-up, and — despite being a world-renowned example of best practice in this field — in 2016 started a new round of discussions to further integrate the system (WWP 2016b).

Based on data in the World Bank's State of Social Safety Nets 2015 (Honorati, Gentilini and Yemtsov 2015) and additional assessment, some form or other of social protection information system is already fully institutionalised in 30 low- and middle-income countries worldwide (15 in Latin America, six in Africa, five in Europe and the Middle East and four in the Asia-Pacific).²⁹ The data repositories for many of these systems are set up as social registries. Currently an additional 31 countries — 18 of which are in Sub-Saharan Africa — are considering and developing options for integration in this sector (see Table 6).

²⁹ The World Bank's full list includes 21 countries. This report also provides additional countries based on the author's own assessments.

Table 6 List of countries that have developed or are developing 'integrated' social protection information systems

Latin America	Africa	Europe and Middle East	Asia-Pacific
Existing systems			
 Argentina, Single Database for Social Security (BUSS) Belize, Single Identification System of Beneficiaries (SISB) Bolivia, Beneficiary Registry of Social Programs Brazil, Cadastro Único Chile, Social Registry of Households (RSH) Colombia, Integrated Information System of Social Protection (SISPRO) Costa Rica, Sistema de Identificación de la Población Objectivo (SIPO) Dominican Republic, Sistema Único de Beneficiaros (SIUBEN) Ecuador, Social Registry and Registry of Social Programs (RIPS) Guatemala, Registro Único de Usuarios Nacional (RUU-N) Honduras, Unique Registry of Participants (RUP) Jamaica, Beneficiary Management Information System Mexico, Cuestionario Único de Información Socioeconómica Panama, Unified Registry of Beneficiaries (RUB) Uruguay, Integrated Information System for the Social Area (SIIAS) 	 » Cabo Verde, Unique Registry » Kenya, Single Registry » Lesotho, National Information System for Social Assistance (NISSA) » Mauritius, Social Register of Mauritius (SRM) » Seychelles, IMIS » South Africa, SOCPEN 	 » Armenia, Family Benefit System » Azerbaijan, Ministry of Labor and Social Protection of Population MIS (MLSPP) » Macedonia, Cash Benefits Management Information System (CBM) » Romania, Integrated Information System for Administration of Social Benefits » Turkey, Social Assistance Information System (SAIS) 	 » Indonesia, Basis Data Terpadu (or Unified Database for Social Protection, PPLS) » Pakistan, National Socio Economic Registry » Malaysia, eKasih » Philippines, Listahanan (or National Household Targeting System for Poverty Reduction, NHTS-PR NSER)

Latin America	Africa	Europe and Middle East	Asia-Pacific
Systems that are being developed			
 » Dominica, National Beneficiary Information System (NBIS) » El Salvador, Single Registry of Beneficiaries (RUP) » Nicaragua, Unique Registry of Participants (RUP) » Paraguay, Single Registry of Beneficiaries » Peru, National Registry of Beneficiaries » St Lucia, Central Beneficiary Registry 	 » Benin, Unique Registry » Djibouti, Unique Register » Egypt, Unified National Registry » Ethiopia, National Household Registry (social registry) and Central Social Protection Management Information System (integrated beneficiary registry) » Ghana, Ghana National Household Registry (GNHR) » Liberia (name unknown) » Malawi, Unified Beneficiary Registry » Mali, Social Registry » Mali, Social Registry » Morocco, Unified Register » Nigeria (name unknown) » Rwanda, Integrated Management Information System » Senegal, Unique Registry » Tanzania, TASAF Social Registry » Tunisia, Unified Registry and Unique Identification System » Uganda (name unknown) » Zambia, Single Registry of Beneficiaries » Zimbabwe, Integrated Social Protection Management Information System 	 » Georgia, System of Social Assistance » Jordan, National Unified Registry » Lebanon, National Poverty Targeting Program 	 Bangladesh, Bangladesh Poverty Database Cambodia, ID Poor Mongolia, Intersectoral Database of Poor Households and Registry of Beneficiaries Tajikistan, National Registry of Social Protection

Source: Honorati, Gentilini and Yemtsov (2015) and author's integrations.

Note: This table uses the common name of each countries integrated social protection information system.

These integrated systems range greatly in their set-up, functions and levels of cross-sectoral integration. This is exemplified by the number of social protection programs they serve, which ranges from two (Cabo Verde) to over 80 (Chile), as shown in Figure 4 below, and by the number of web service links they establish with other government databases, which ranges from zero to 43 (Chile). Of course, they also differ in their approach to setting up the underlying data repository — many are operationalised as social registries, others as integrated beneficiary registries³⁰ (see Section 2.3).





Source: Honorati, Gentilini and Yemtsov (2015) and author's updates (online survey and recent literature).

Moreover, whether calculated as numbers of individuals or households or as a percentage of population, the size of existing systems (i.e. the total number of households and individuals they have data on) varies greatly from country to country, depending on a variety of factors.

As exemplified in Figure 5, the highest population 'coverage' (percentage of population registered) is reached by systems that guarantee full interoperability. For example, in Uruguay the use of data from existing administrative databases (using national ID for linking) means all citizens and residents are registered (including those who have died, those who have moved abroad and foreigners living in the country). Social registries with census survey approaches to data collection (see Section 4.2.1) that aim to survey all households in a given country follow close behind — as exemplified by Pakistan and the Philippines. Countries with social registries with on-demand data collection approaches (e.g. Brazil and South Africa) or census surveys of selected population groups (e.g. Indonesia) have marginally lower coverage rates — 40–50 per cent of the population. By definition, countries with integrated beneficiary registries have lower coverage, as only beneficiaries are included in the integrated registry (e.g. Kenya). Djibouti and Malaysia fail to hit the 5 per cent coverage mark as their systems are currently being expanded.

³⁰ The amount of information available on each country's experience was not sufficient to classify these explicitly.



Figure 5 Percentage of population covered, selected systems

Source: Author's analysis (online survey and recent literature).

Note: Countries and registries included are not necessarily the same as above, as some report number of households and some report number of individuals.

Less significant as a comparison (as it is strongly affected by a country's population size), yet interesting to give a sense of the magnitude of these efforts is the number of households registered (see Figure 6). The largest of all efforts in absolute terms is Pakistan's National Socio-Economic Registry (linked to the Benazir Income Support Programme, BISP), which contains information on 167 million individuals, equivalent to 27 million households or 92 per cent of the population (2015).³¹ Far behind in terms of population coverage (43 per cent) but very close in terms of number of households (almost 27 million) is Brazil's Cadastro Único, followed by Indonesia's Unified Database (25 million households, 40 per cent of population).

³¹ Interestingly, this is far lower than the number of beneficiaries registered for China's Dibao program registry of beneficiaries, which comprehends 78 million households (Honorati, Gentilini and Yemtsov 2015) — representing, however, only 6 per cent of China's population.



Figure 6 Number of households registered, selected registries

Source: Honorati, Gentilini and Yemtsov (2015) and author's updates (online survey and recent literature). Note: Mauritius and Lesotho have registered 0.04 million beneficiaries.¬¬

The percentage of registered people or households receiving any form of social assistance (beneficiaries) also varies greatly from country to country — partly depending on the selected approach to integration. In Kenya, for example, 100 per cent of individuals registered are also beneficiaries (as this is an integrated beneficiary registry as described in Section 1.2.1). In Pakistan, the number of BISP beneficiaries was 4.8 million in 2015, equivalent to 18 per cent of the households within the national registry. In the Philippines, 5.1 million of the total 15 million registered (33 per cent) were classified as poor and therefore eligible for any benefit. In countries where data collection is primarily on demand and based on citizen applications (see Section 4.2.1 for more details), it is likely that this ratio is highest, as the households most likely to apply are those most in need (self-targeting).

Box 7: SOCPEN, South Africa's legacy system

The Republic of South Africa's Department of Social Development (established in 1929), together with the South Africa Social Security Agency (SASSA), runs a comprehensive system of social assistance grants and processes 16,991,634 grants monthly³³ (collected by just over 11 million recipients). The grants are processed using a legacy system called SOCPEN, which started in the 1930s.

SOCPEN runs on a non-graphical user interface based on mainframes located at the State Information Technology Agency (SITA). Its legacy enterprise database, Adabas, manages more than 2300 concurrent users and has a registry of more than 16 million beneficiaries, with primary data collected through an on-demand application system. Since implementation is handled by one agency, it can be argued that South Africa operates a 'single window' for processing applicants.

To perform its key functions — processing applications for the country's six social grants, determining beneficiaries from the list of applicants, maintaining the payroll for the grants, and automatically producing a list of beneficiaries to be re-assessed — SOCPEN links to a file-tracking system providing real-time information on the status of social grant applications and to Livelink, a document management system that scans and manages records of grant recipients.

SOCPEN interfaces with other government MISs, the most important of which is that of the Department of Home Affairs, and can provide real-time information from the population registry (e.g. deaths). An online interface has also been established with PERSAL (government payroll system) to cross-check income data. Other ad hoc data sources (not linked online) include the Unemployment Insurance Fund; Government Employees Pension Fund; payroll system of the Defence Force; National Treasury (to verify beneficiary banking details); Department of Basic Education learner database; and special investigations unit (to identify fraudulent grants).

While proving that legacy systems can be very effective, the system has limits:

- a reaching its ability to be customised and being overtaken by many technological changes
- b producing substantial volumes of paperwork
- c not being an organisation-wide system covering all SASSA operations, leading to duplication of data-storing and making M&E more difficult
- d linking with other MISs but not always in real time
- e focusing on managing operational processes for grant delivery rather than on policy coordination and oversight.

Moreover, approaches to further integrate SOCPEN and move towards a national integrated social information system (NISIS) have failed to date.

Source: Barca and Chirchir (2014).

32 Source: Interviews with Caesar Vundule and Carin Koster. The current estimate of South Africa's population is 54 million.

Number of staff involved at central level (full time)	More than 30 staff
Any information on costs	Being costed now (2016)
Linkages to other non-social protection institutions and their databases	Not linked to civil registry but shares data with education and health MISs and with land registration database
Number/ names of social protection programs using database	Over 30 programs at national level, including Bolsa Família, plus several decentralised programs. Does not include social insurance or some flagship social protection programs (e.g. Bolsa Prestação Continuada)
Data collection and updating approach	On-demand continuous registration in 9413 centres within country, with obligation of updating every 2 years at most Mobile units for remote locations etc.
Number of individuals or households receiving benefits (relevant year)	14 million Bolsa Família beneficiaries, but not currently possible to verify beneficaries' multiple benefits
Number of individuals/ households registered (relevant year)	26.8 million households (2015). Amounts to 43% of population.
Received donor support	Č e
Year of creation	2001
Country, name of system and source	Brazil Cadastro Único (WWP 2016b; online survey)

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Number of staff involved at central level (full time)	16 staff
Any information on costs	In the last years, around 0.5 million annually (2016)
Linkages to other non-social protection institutions and their databases	Linked to civil registry, social insurance data from 43 state agencies and their multiple databases, including ministries such as education, health, labour and social security, housing and urban development; and the tax authority etc. Also linked to 345 municipalities
Number/ names of social programs using database	In 2016, over 80 social programs in Chile were using RSH to select their beneficiaries
Data collection and updating approach	Combination of on-demand (within municipalities and online), periodic census survey and use of existing administrative data Continuous update
Number of individuals or households receiving benefits (relevant year)	
Number of individuals/ households registered (relevant year)	12.4 million individuals, 4 million households (2016). Amounts to 72% of population.
Received donor support	°Z
Year of creation	1979 (has had major changes since) Institutionalised in 2007 and transformed again in 2016
Country, name of system and source	Chile Registro Social de Hogares (RSH) (Covarrubias et al. 2011; Azevedo, Bouillon and Irarrázaval 2014; WWP 2016b; online survey)

Number of staff involved at central level (full time)	No info
Any information on costs	No info
Linkages to other non-social protection institutions and their databases	Linked to integrated system of health insurance (SIIS), integrated contribution system of social security, information system for operation of health insurance, information system for regulation of medicines, and more
Number/ names of social programs using database	Now serves 31 programs (including Familias en Acción) and 8 institutions
Data collection and updating approach	Started as census survey sweep in geographically targeted areas; now on-demand registration and updating at local offices and census survey outreach in areas with highest levels of poverty
Number of individuals or households receiving benefits (relevant year)	
Number of individuals/ households registered (relevant year)	10.4 million households (2015). Amounts to 73% of population.
Received donor support	No info
Year of creation	1995
Country, name of system and source	Colombia SISBEN (ILO 2015b; Leite et al. 2017)

Number of staff involved at central level (full time)	37 staff unit unit	Some 20 ministries/ agencies
Numb of sta involv at cen level (time)	37 st unit d	Son staf age
Any information on costs	No info	Noinfo
Linkages to other non-social protection institutions and their databases	Yes, but only recent effort (national ID is not unique ID for database) Also links to health MIS, bank database	Linked to civil registry and to social security database in plan
Number/ names of social protection programs using database	5 main national programs — including Health Indonesia Program Indonesia Pintar (KIP) and Program Simpanan Keluarga Sejahtera (KKS) — as well as local government programs	Currently 5 main social protection programs in the country: CT-OVC, HNSP, OPCT, PWSD-CT and World Food Programme asset creation program
Data collection and updating approach	Census survey Households chosen for interview based on existing poverty data from population census, socioeconomic survey (the Survei Susenas) and 'village potential' survey (the Potensi Desa, Podes) Previously a new round of data collection every 3 years. Now Indonesia is developing an 'on demand application' to update UDB data dynamically without using large-scale census.	Data collected by individual programs (census survey) and consolidated nationally
Number of individuals or households receiving benefits (relevant year)	Depends on the program (people can receive more than one)	882,678 households (all included are beneficiaries)
Number of individuals/ households registered (relevant year)	97 million individuals registered, 25 million households (2016). Amounts to 40% of population.	882,678 households. Amounts to approximately 8.4% of population
Received donor support	Yes, DFAT and World Bank	Yes
Year of creation	2011	2011
Country, name of system and source	Indonesia Basis Data Terpadu, or Unified Database (UDB) (database website and documentation, OPM 2015a, online survey)	Kenya Single Registry (Ministry of State Planning 2011, online survey, Chirchir and Kidd 2011, WFP and Government of Kenya 2015)

Number of staff involved at central level (full time)	No info	No info
Any information on costs	No info	No info
Linkages to other non-social protection institutions and their databases	No info	Links to biometric national ID database (NADRA) but not to social insurance
Number/ names of social protection programs using database	No info	30 federal and provincial social sector programs, including BISP
Data collection and updating approach	Collected from a poverty census (Banci Isi Rumah Miskin) Online registration also available	Data from National Database and Registration Authority (NADRA) and BISP census survey (in the field 2016 to update Poverty Scorecard Survey in 2010–11) On-demand registration will also be tested
Number of individuals or households receiving benefits (relevant year)	No info	4.8 million households were BISP beneficiaries (2015)
Number of individuals/ households registered (relevant year)	 1.2 million individuals (July 2013), Amounts to 4% of population 	167 million individuals, 27 million households (2015). Amounts to 92% of population.
Received donor support	No info	Yes, World Bank and DFID
Year of creation	Created October 2007, rolled out in July 2008	2010
Country, name of system and source	Malaysia National Poverty Data Bank (eKasih) (ICU JPM 2013)	Pakistan National Socio-Economic Registry (used by BISP) (registry website, BISP-SN 2016 and Malik 2014)

Number of staff involved at central level (full time)	No info	15 technical and 12 functional support resources y
Any information on costs	No info	Average running cost for support and maintenance is approximately 37 million South African rand per year
Linkages to other non-social protection institutions and their databases	No info	Linked to civil registry but not to social insurance database Also linked to national learners database and municipalities' indigent databases
Number/ names of social protection programs using database	Used by 59 programs from many government agencies (including Pantawid CCT, the social pension, subsidised health insurance), as well as by local governments and other institutions	All social assistance programs: old age grants, disability grants, war veterans' grants, care dependency grants, foster child grants and child support grants
Data collection and updating approach	Census survey Listahanan's first nationwide update and recertification was undertaken in 2015	On demand: citizens enter the system on a needs basis Those who qualify for grants go to SASSA's network of 366 local offices to apply Update is continuous based on on-demand system and every contact with client
Number of individuals or households receiving benefits (relevant year)	5.1 million households classified as poor (2016)	Total number of individual grants paid: 16,893,574 (January 2016) 2016)
Number of individuals/ households registered (relevant year)	15.3 million households (2016). Amounts to 77% of population.	11.4 million individuals registered ('active beneficiaries') (January 2016). Amounts to 21% of population.
Received donor support	Yes World Bank and DFAT	No, national budget
Year of creation	5008	1985
Country, name of system and source	Philippines Listahanan (Leite et al. 2017, Listahanan official infographic)	South Africa SOCPEN (Social Pension System) (system database and website and online survey)

Number of staff involved at central level (full time)	28 software engineers, 12 expert staff Total approx. 40	7 staff at national level
Any information on costs	Approx. 10 million US dollars (amount includes software and hardware costs)	To date 3,690,000, US dollars with annual costs estimated at 500,000 US dollars a year
Linkages to other non-social protection institutions and their databases	Linked to civil registry, education MIS, tax system database, cadastral database, e-government portal — overall 112 web services with 22 public institutions	Links to civil registry and 15 different institutions providing data
Number/ names of social programs using database	24 different programs, notably Conditional Cash Transfer Program, Payments for Disabled and Elderly Turkish Citizens, Food and Heating Assistance, Cash Transfers For Vulnerable Groups	62 programs using data
Data collection and updating approach	On demand through local offices, with additional data from wirtual consolidation across a wide range of government databases Regularly as new applicants apply and change their status (on demand) plus household visits to beneficiary households by local officers at least once a year	Data integrated from 15 different administrative databases, including MISs of existing social protection programs
Number of individuals or households receiving benefits (relevant year)	Some 3 million households were recipients of any benefits in 2015	4 million individuals
Number of individuals/ households registered (relevant year)	34 million individuals registered (9.7 million households) (January 2016). Amounts to 45% of population.	 4.3 million individuals registered. Amounts to 122% of population, as this includes those who have already died, foreigners and migrants.
Received donor support	No, national budget	Yes, World Bank
Year of creation	2010	2006, operational since 2010
Country, name of system and source	Turkey Integrated Social Assistance Information System (ministry documents and online survey)	Uruguay Sistema de Información Integrada del Área Social (SIIAS) (NWP 2016b, online survey)

3.2 What factors drive country progress?

One important lesson emerges when analysing country experiences: no two countries take the same path towards integration of social protection data and information management. This means that the official 'name' of a country's solution to integration tells us little or nothing on the way it is set up in practice: what needs to be analysed and understood when comparing countries is where data is flowing from (e.g. what are the primary data sources, where is new data being collected) and to (e.g. who has access to this data and how).

Whether gradual (setting up program MISs and then trying to integrate fragmented efforts into a wider and integrated approach within the social protection sector) or immediate (designing and implementing a social registry and its complementary software application), each country tackles internal needs based on contextual constraints, opportunities and objectives.³³

- » The main factor affecting information needs and integration requirements is the core policy objective pursued by country policymakers. Is data and information integration viewed as a way to gain oversight over multiple schemes, as an efficient approach to determining program eligibility, or as a side-product of an integrated approach to service delivery (see Section 1.2 for more details)? Is social protection seen as an entitlement and conceptualised so as to address households' life-cycle vulnerabilities? Is there a strong policy push towards integration? Is integration envisaged only within non-contributory programs, across contributory and noncontributory programs, or more widely across the social sectors?
- » A second important factor is the set-up of a country's main social protection programs. For example, are these targeted or universal? Conditional or not? Managed entirely by government or by third parties? Centralised or decentralised? Collecting data on demand or based on ad hoc censuses? Covering what percentage of population?
- » A third factor relates to the enabling/constraining country context. Is there availability of funds for designing, creating and maintaining the system (from government or donors)? Is there sufficient staff capacity at all government levels? Is there possibility for technological innovation (e.g. network connection and hardware infrastructure)? Is there a national ID system in place to provide unique identifiers to readily link across different government databases? Is there a wider government focus on performance-based management and e-government? Is there a sound legal framework in place to prevent the misuse of data and protect individuals' right to privacy?

Some of these questions are further outlined in Annex 2 as guidelines for country needs and feasibility assessments.

³³ This is inherent in the design of all MISs, even in the business sector, where, by its very nature, information management is designed to meet the unique needs of individual institutions.

3.3 Typology to classify country progress

This section provides a typology that helps to classify country experience to date.³⁴ The typology combines two categories (represented as axes in Figure 7):

- 1. 'Breadth' of integration a continuum based on the breadth of scope and level of interconnectivity of the overall system for information management, within the social protection sector (and beyond).³⁵ Integration can occur:
 - a at program level (no integration), where information is managed through a program MIS. In its most basic construction, an MIS manages information and operations in a single social protection program. It is not connected with other systems and databases
 - b within selected programs of the social assistance sector (i.e. non-contributory social protection)
 - c within the whole of the social assistance sector, encompassing all government non-contributory programs (and potentially even NGO/international organisation interventions)
 - d within the wider social protection sector, as above, but encompassing contributory as well as noncontributory schemes
 - e across sectors within a country, whereby the interoperability of information is extended to other social sectors (for example, health and education).
- 2. 'Depth' of integration a rough categorisation of the exchanges that operate with external (non social protection) databases³⁶ (linked to wider objectives of integration see also Section 1.2).
 - a No integration: no link to external (non-social protection) databases
 - b Using data for verification: links to external databases, but only to verify and validate its information (either ad hoc or continuously)
 - c Using data for registration/eligibility: links to external databases, but primarily to collect data used for registration (see Section 4.2.1) and determining eligibility (uni-directional flow)
 - d Sharing data to integrate service delivery and increase citizen focus: bi-directional links with external databases, enabling streamlining of services and/or operations within the social protection sector and beyond.

Figure 7 provides examples of countries that broadly fall into one category or the other. Note that:

- » some of the categories within the typology overlap and are not entirely clear-cut or sequential, as they have been selected primarily to show increasing complexity. For example, several countries achieve integration with other social sectors without having necessarily integrated contributory and non-contributory social protection. Similarly, most countries that integrate data with other sectors to increase citizen focus and improve service delivery also use external data for verification and for registration and determination of eligibility
- » a country's positioning can and will evolve over time depending on its shifting priorities (e.g. policy objectives) and constraints/enablers (e.g. technology, staff capacity)
- » countries' shifts are not necessarily 'linear'. Countries make constant adjustments along the way, and are not necessarily all heading in the same direction (i.e. there is no ideal trajectory or position in the matrix).

³⁴ This typology has evolved compared to the first version of this report, based on useful discussions and inputs from Kathy Lindert (World Bank) and workshop participants in Jakarta.

³⁵ This continuum, in practice, represents the natural trajectory that many MISs follow over the years due to increasing program demands (complexity of management), increasing external pressure to share data (given the high costs of collection) and political economy considerations. However, some countries may 'skip a step' in the process, for example consolidating social assistance programs with other sectorial databases without achieving full integration within the social protection sector.

³⁶ Databases here refers to databases that are not program MISs. These could include a country's civil registry, tax registry, land registry etc.



Figure 7 Typology: breadth and depth of data and information integration

Source: Developed by the author.