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Social protection as a tool to address slow onset climate events: Emerging issues for research and policy

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Social Protection as a Tool to Address Slow Onset Climate Events

Emerging issues for research and policy

Mariya Aleksandrova

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Abstract

This discussion paper aims to further awareness of opportunities to address loss and damage caused by climate change-related slow onset events (SOEs) through social protection. The analysis is based on a review of interdisciplinary theoretical and empirical literature. The findings suggest that designing comprehensive, climate-responsive social protection strategies can strongly support proactive measures to avoid, minimise and address the complex, long-term impacts of SOEs on human health, livelihoods, poverty and inequality. This entails improving the effectiveness and extending the coverage of existing social protection systems; mainstreaming climate concerns, including risks associated with SOEs, into national social protection frameworks; integrating social protection with broader climate and development policies and strategies; and developing innovative and transformational approaches to social protection. To this end, several issues for research and policy are discussed. Overall, the paper attempts to set the groundwork for an advanced research and policy agenda on social protection and climate change as well as emphasise the need for wider consideration of social protection in global climate change debates. In addition, the study aims to inform the future work of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts in the working areas of SOEs and comprehensive risk management approaches.

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Contents

Abstract

Acknowledgements

Abbreviations

1	Introduction	1
1.1	Analytical framework	3
2	Social protection and climate change: Conceptual and policy foundations	5
2.1	Defining social protection	5
2.2	Social protection instruments	6
2.2.1	Social assistance programmes	6
2.2.2	Social insurance and microinsurance schemes	7
2.2.3	Social health protection	8
2.2.4	Livelihood development approaches	8
2.3	Social protection frameworks for addressing climate-related risks	9
2.3.1	Adaptive social protection	10
2.3.2	Social protection as a risk retention tool in the L&D discourse	10
3	The potential of social protection as a strategic response to slow onset events	11
3.1	Building adaptive capacity through social inclusion	11
3.2	Reducing vulnerability by addressing multi-dimensional poverty	13
3.3	Building resilient livelihoods	14
3.3.1	Agriculture-based livelihoods	14
3.3.2	Fisheries-based livelihoods	16
3.3.3	Urban livelihoods	17
4	Emerging issues for research and policy	19
5	Outlook	23

Boxes

Box 1:	Key terms: Adaptive capacity, resilience, vulnerability	5
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Tables

Table 1:	Social protection interventions for addressing loss and damage from slow onset events – selected examples	18
Table 2:	Priorities for research on social protection and climate change with a focus on slow onset events	22

Abbreviations

ASP	adaptive social protection
CRM	comprehensive risk management
ILO	International Labour Organization
L&D	loss and damage
LDCs	Least Developed Countries
PWP	public works programme
SIDS	Small Island Developing State
SOE	slow onset event
UNFCCC	United Nations Framework Convention on Climate Change
WIM	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

1 Introduction

Global warming of 1.5°C above pre-industrial levels by the middle of this century is most likely inevitable (IPCC, 2018). Vulnerable populations living in dryland areas, Small Island Developing States (SIDS) and Least Developed Countries (LDCs) will experience further poverty and marginalisation (IPCC, 2018). The impacts of the optimistic 1.5°C scenario could be minimised or avoided to a certain extent, if countries were to make major shifts towards climate-resilient development. These, however, should be aimed at reducing poverty and inequality since these factors undermine adaptation and mitigation action (IPCC, 2018). The United Nations Framework Convention on Climate Change (UNFCCC) through the Paris Agreement emphasises “the intrinsic relationship that climate change actions, responses and impacts have with equitable access to sustainable development and eradication of poverty” (UNFCCC, 2015).

In recent years, there has been growing recognition among policy-makers that building resilience to the adverse effects of climate change in developing countries necessitates strong and effective social protection policies and mechanisms. For instance, a commitment to strengthening social protection systems for disaster response has been made by countries signatory to the Sendai Framework for Disaster Risk Reduction 2015-2030 and the United Nations Convention to Combat Desertification. Likewise, lead international development organisations, such as the International Labour Organization (ILO), the World Bank and the Food and Agriculture Organization have already incorporated climate risk considerations into their social protection strategies (see Aleksandrova, 2019).

The topic of social protection gained significant recognition in the global climate change policy arena with the establishment of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) in 2013. The WIM is mandated to support vulnerable developing countries in their efforts to avoid, minimise and address loss and damage (L&D) from dangerous climate. The initial two-year work plan followed by five-year rolling work plan of the Executive Committee of WIM chart the courses of action to address the impacts of climate extremes and slow onset events (SOEs) through comprehensive risk management (CRM) approaches, including social protection (UNFCCC, 2014, 2016).¹ More specifically, social protection is defined as a risk retention measure “to assist individuals, households, and communities in better managing risk, and to provide financial support to the critically poor”, whereas social protection policies “are designed to reduce people’s exposure to risks, enhancing their capacity to protect themselves against hazards and loss of income” (UNFCCC, 2017). Noticeably, social protection is viewed primarily as a measure to respond to climate extremes and disasters. The potential of social protection to address SOEs, non-economic losses and human mobility has been given less consideration in the WIM agenda. However, scholars have already emphasised that social protection has a crucial role to play in the broader climate change and development context, including in disaster risk reduction and climate change adaptation (e.g., Béné et al., 2014; Davies et al., 2013; Davies et al., 2008; Dulal and Shah,

1 The term “slow onset events”, as used herein, refers to: sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinisation, land and forest degradation, loss of biodiversity and desertification (UNFCCC, 2011).

2014; Heltberg et al., 2009; Wood, 2011), societal transformation towards green growth (Dercon, 2011; Dercon, 2014; Heltberg et al., 2009; Malerba, 2019), and in addressing human mobility in the context of climate change (Johnson and Krishnamurthy, 2010; Schwan and Yu, 2018).

Social protection is increasingly seen as a key strategic tool for reaching the most vulnerable people and promoting pro-poor growth and equality (Barrientos and Hulme, 2009). Still, today, only 18 per cent of the population of Africa and 39 per cent of the population of Asia and the Pacific receive some form of social protection benefits (ILO, 2017). Over half of the world's rural inhabitants remain without legal health coverage; the disparity is the largest in Africa (80 per cent) and in Asia (56 per cent) (ILO, 2017). Moreover, high urbanisation trends in developing countries indicate that poverty is alarmingly urbanising, while most social safety net programmes in low-income countries tend to have a rural focus (World Bank, 2015). Climate change poses additional risks to the most vulnerable social groups and undermines ongoing poverty reduction efforts (Béné, 2011). In the future, the number of people in need of social protection as a result of having experienced disasters and gradual environmental change will likely grow. All these factors resonate the pressing need to extend social protection coverage in vulnerable countries and to question if the existing social protection frameworks are capable of responding to the challenges of tomorrow.

To date, most studies examine the role of social protection in disaster risk reduction and climate change adaptation. However, more research is needed to understand the potential of social protection for building long-term resilience to climate change (Johnson et al., 2013; Ulrichs et al., 2019). Moreover, social protection and climate change research has not been explicitly linked to the WIM policy agenda, particularly to the specific topics of SOEs and residual impacts (Aleksandrova, 2019).² The scope of the studies relevant to SOEs is limited to examining the role of social protection in responding to recurring droughts or environmental degradation in agricultural regions. To the best of the author's knowledge, no other studies have previously examined the linkages between social protection and a broader range of SOEs (e.g., sea level rise, loss of land and coastal ecosystems) through the lens of CRM and L&D. For the purposes of this analysis, L&D refers to actual (past and current) and/or potential (that might occur in future) loss and damage caused by climate change (Roberts and Pelling, 2018).

This paper aims to fill these gaps by providing a structured overview of the multiplicity of risks related to SOEs, underlying vulnerabilities and promising risk-responsive social protection interventions. The objective of the discussion is to advance the understanding of social protection as a CRM instrument to avert, minimise and address residual L&D associated with SOEs. In particular, this study provides an overview of the current discourse on social protection and climate change (Section 2), examines the potential of social protection for a strategic response to SOEs (Section 3), and discusses emerging needs for research and policy (Section 4). Concluding notes are presented in Section 5.

Methodologically, this discussion paper is based on a review of interdisciplinary theoretical and empirical literature. The potential of selected social protection tools to address L&D associated with SOEs is examined while considering their benefits for reducing

2 Residual impacts refer to loss and damage caused by climate change that materialise despite risk reduction interventions and traditional adaptation.

vulnerability and building adaptive capacity through social inclusion, poverty reduction and livelihood enhancement.

The findings suggest that designing comprehensive, climate-responsive social protection strategies can strongly support proactive steps to avoid, minimise and address the complex, long-term impacts of SOEs on human health, livelihood, poverty and inequality. This entails improving the effectiveness and extending the coverage of existing social protection systems; mainstreaming climate concerns, including risks associated with SOEs, into national social protection frameworks; integrating social protection with broader climate and development policies and strategies; and developing innovative and transformational approaches to social protection.

1.1 Analytical framework

Social trajectories of L&D from SOEs

Designing effective climate risk-responsive social protection systems requires an understanding of who is vulnerable to climate change, and most importantly, why. People in need of social protection are the chronically poor (e.g., the severely disabled, subsistence smallholders), the economically at risk (e.g., informal sector workers, widows, cash crop farmers) and the socially vulnerable (e.g., ethnic minorities, people with disabilities, female-headed households) (Devereux and Sabates-Wheeler, 2004). Their vulnerability is rooted in multi-dimensional and intergenerational poverty and inequality (Barrientos and Hulme, 2009) that can be deepened by the direct and indirect impacts of SOEs (UNFCCC, 2012).

SOEs are gradual processes that will adversely affect current and future generations by altering the conditions under which coastal regions, rural areas and cities develop. Impacts range from economic L&D, such as loss of income and economic opportunities, for example, due to declining fish stocks or forest degradation, to non-economic losses, including health impacts, conflicts over the use of scarce natural resources, displacement, and loss of social cohesion, among others (e.g., see Serdeczny et al., 2018). Consequently, SOEs can undermine ongoing poverty reduction efforts, put more people at risk of losing their income and exacerbate existing social inequalities.

Economic growth and poverty reduction in lower-income countries have been linked to increasing emissions and environmental degradation (e.g., Malerba, 2019; Ota, 2017). At the same time, national governments are urged to reduce emissions and prevent further negative impacts on natural systems. While such efforts are indeed needed to avert avoidable L&D, these can have significant adverse effects on the currently poor (Dercon, 2014) and socially marginalised people whose livelihoods depend on carbon-intensive and unsustainable sectors. Therefore, in this paper, the negative impact of climate change-related policies on poor and marginalised people is considered loss associated with climate change. This includes unemployment, price increases and reduced public budgets for social support programmes, among others (Dercon, 2014).

Impact areas of social protection as a strategy to address L&D from SOEs

Against this backdrop, the following key impact areas of social protection as a strategy to avoid, minimise and address residual L&D from SOEs fall in the scope of the analysis presented in the next section.

(i) Building adaptive capacity through social inclusion

Social inclusion can strengthen the ability of vulnerable people to avoid, minimise and address the impact of SOEs, as it relates to “the process of improving the terms of participation in society, particularly for people who are disadvantaged, through enhancing opportunities, access to resources, voice and respect for rights” (UN, 2016) (see Box 1 for the definition of adaptive capacity according to the IPCC (2014)). For example, changes in institutional arrangements, policies and legislation that aim to address discrimination and the distribution of land use rights, and encourage collective action can be instrumental in promoting social inclusion (UN, 2016) and effective adaptation (e.g., Görgens and Ziervogel, 2019; Hughes, 2013; Rao et al., 2019).

(ii) Reducing vulnerability by addressing multi-dimensional poverty

Poor and socially marginalised people are less able to cope with climate shocks and adapt to environmental degradation. They are also more susceptible to L&D from SOEs. For example, poor living conditions in urban slums expose inhabitants to multiple risks associated with increasing temperatures and water scarcity, such as diseases and malnutrition. Therefore, vulnerability to SOEs can be reduced by addressing poverty and its root causes.

Multi-dimensional poverty has been linked to food insecurity, inadequate education and healthcare, limited employment opportunities, and low living standards (Song and Imai, 2019). Key impact areas of traditional social protection measures to reduce poverty are household food security, health and nutrition; access to health and education; and asset accumulation. In the context of this study, an emerging issue is also the role of social protection in the climate change-human mobility nexus.

(iii) Building resilient livelihoods

In many vulnerable developing countries, L&D from SOEs present a greater threat to the livelihoods of poor and socially marginalised people than life-cycle risks that are addressed by conventional social protection systems. Therefore, the latter should be adapted to consider risks and opportunities within the broader local and national development contexts.

Livelihood and local development approaches for building resilience to climate change encompass a wide array of measures aimed at increased income opportunities, economic diversification and access to financing, among others. When supported by effective social protection policies and mechanisms, these approaches can enhance the long-term resilience and adaptive capacity of vulnerable people.

Box 1: Key terms: Adaptive capacity, resilience, vulnerability

Adaptive capacity: The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

Resilience: The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.

Vulnerability: The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.

Source: IPCC (2014)

2 Social protection and climate change: Conceptual and policy foundations

2.1 Defining social protection

The understanding of social protection in the development assistance context has evolved significantly in recent years. While in the 1980s and 1990s, social protection interventions were focused solely on safety nets, today social protection programmes encompass a wide range of interventions aimed at reducing poverty and vulnerability (Devereux and Sabates-Wheeler, 2004), and addressing emerging risks like climate change (Aleksandrova, 2019; Béné et al., 2014; Coirolo et al., 2013; Davies et al., 2013; Davies et al., 2008; Dulal and Shah, 2014; Heltberg et al., 2009; Kuriakose et al., 2013; Schwan and Yu, 2018; Ulrichs et al., 2019; Wood, 2011).

The ILO conceptualises social protection as a human right and defines it as a “set of policies and programmes designed to reduce and prevent poverty, vulnerability and social exclusion throughout the life cycle [...] by a mix of contributory schemes (social insurance) and non-contributory tax-financed benefits (including social assistance)” (ILO, 2017). The adoption of a rights-based approach shifts the angle of social protection from that of a policy option to an obligation and responsibility of states and international governance regimes (Barrientos and Hulme, 2009). This paves the way for the establishment of national social protection floors, which are a “nationally defined set of basic social security guarantees [that] secure protection aimed at preventing or alleviating poverty, vulnerability and social exclusion” (ILO, 2017). The national social protection floors are premised on the idea that all in need should have basic income security and access to essential health care. In contrast, the World Bank uses a social risk management approach to frame the objectives of its Social Protection and Labour Strategy 2012-2022 (World Bank, 2012), which include improving resilience (risk mitigation), equity (risk coping) and opportunity (risk reduction).

This paper adopts the social protection framework of the ILO with the objective to place the risk of L&D from SOEs at the forefront of achieving Sustainable Development Goal 1.3: “implement nationally appropriate social protection systems and measures for all, including

floors, and by 2030 achieve substantial coverage of the poor and the vulnerable” (UN General Assembly, 2015).

2.2 Social protection instruments³

2.2.1 Social assistance programmes

Social assistance encompasses non-contributory social protection programmes that provide regular benefits (social transfers and services) to poor and vulnerable people, with the objective of reducing chronic poverty and economic vulnerability to shocks. These programmes are funded primarily from state budgets. Social assistance can be universally provided but, in most cases, social transfers are poverty targeted and focused on life-cycle risks, for example, family allowances and social pensions for old-age or disability (EC, 2015). Social assistance instruments also include public works programmes (PWPs), child allowances, subsidies and fee waivers, among others.

In the context of development, social assistance programmes are referred to as safety nets (Barrientos and Hulme, 2009) by, for example, the World Bank and the International Red Cross and Red Crescent Movement. The main distinction between social assistance and safety net programmes is that the latter include humanitarian and disaster relief interventions financed primarily by donor organisations. The most common safety net programmes are PWPs, cash transfers (conditional and unconditional), and in-kind transfers (e.g., school feeding and fee waivers to support access to basic services, such as education, housing and health) (World Bank, 2015). Major limitations of the safety net programmes across Africa, Asia and the Pacific are that interventions remain largely fragmented, unequally distributed in terms of coverage, mostly donor-driven, and lack a holistic, coherent and coordinated structure (World Bank, 2012).

Social transfers can have a positive effect on livelihood enhancement, diversification and social networks. However, the success of these interventions depends on their design: the size of the transfer, timing, frequency, duration, targeting mechanisms and distribution channels (Barrientos, 2012). For example, larger transfer levels can increase the non-bank savings of the poorest groups and encourage investment in productive assets, such as livestock (e.g., Bastagli et al., 2016; Evans et al., 2014).

PWPs provide regular payments by government organisations to vulnerable unemployed individuals through employment guarantee schemes, “cash for work” or “food for work” programmes (ILO, 2017). These programmes are particularly beneficial in addressing seasonal unemployment and income-related shocks (EC, 2015). They can offer “double dividends”: jobs and income for the poor on the one side and improving public infrastructure

3 This paper reviews key social protection instruments used by governments and donor organisations. Both social assistance and safety nets programmes have been reviewed for the purposes of this study. The term “safety nets” is used more often, reflecting the development/humanitarian aid nature of the majority of social protection programmes in lower-income countries. Labour market interventions (e.g., safe work conditions and minimum wage), which are often considered a core element of national social protection policies and programmes, are not included in the analysis. Nonetheless, skills development and employment are discussed in the context of livelihood development.

on the other (Gehrke and Hartwig, 2015). Depending on their duration and objectives, PWPs can be classified as either short-term relief programmes, medium-term programmes integrated into broader development interventions, or employment guarantees (Gehrke and Hartwig, 2015). PWPs are more sustainable when they aim to enhance livelihoods and productivity, facilitate transformation and create long-term job opportunities (Gehrke and Hartwig, 2015; McCord, 2017). However, these programmes have limitations in terms of coverage as they are a social protection mechanism for supporting the working age population, and hence, many vulnerable groups are excluded; long-term social impact of programmes with short duration of the support; effectiveness due the insufficient government capacities to design, implement and finance these programmes (EC, 2015).

Innovative safety net programmes integrate disaster risk reduction considerations. For example, PWPs are increasingly used to strengthen community infrastructure against floods. Social transfer schemes based on forecast-based financing are novel anticipatory measures that can help prevent losses from forecasted extreme climate events, for example, unconditional cash transfers to support disaster preparedness (Costella et al., 2017). In recent years, humanitarian assistance interventions include shock-responsive social protection programmes to respond to crises that affect large numbers of individuals (covariate shocks). These programmes foresee actions for establishing state-led social protection systems and strengthening collaboration between the social protection, disaster risk reduction, and humanitarian sectors (OPM, 2017).

2.2.2 Social insurance and microinsurance schemes

Insurance mechanisms are risk management tools that cover a wide spectrum of risks, for example, sickness, unemployment and property damage. The primary forms of insurance attainable for the poor and socially vulnerable people are microinsurance and social insurance against income-related shocks provided or mandated by government. Social insurance schemes are based on the principle of solidarity and funded by contributions from beneficiaries and their employers or subsidised by the government to support special groups (ILO, 2017).

Microinsurance is a supplementary social protection tool for reaching people excluded from formal social insurance schemes. It offers “protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved” (Churchill, 2007). Microinsurance products are designed to cover a wide range of risks to health (e.g., primary health care), property (e.g., livestock, assets), and income (e.g., crop production), among others. As such, microinsurance schemes can provide financial protection against shocks and access to services, including health care, though meso- and macro-level approaches are necessary to protect the poor from higher-impact natural disasters (ILO, 2012a). Providers of microinsurance are formal insurance organisations, non-governmental organisations, mutual benefit organisations, cooperatives and community-based organisations (ILO, 2012a).

Microinsurance schemes are a plausible option to extend the coverage of formal social insurance to the poor and provide social safeguards in the informal sector. However, unlike social insurance, they have limited applicability in protecting the extremely poor, and in providing robust insurance against health and life cycle risks (see Loewe, 2010). To this

end, Deblon and Loewe (2012) define the following possible roles of microinsurance as a social protection tool:

- a substitute for social insurance in the absence of adequate formal social insurance systems;
- an alternative to social insurance for informal-sector employees;
- a link with social insurance to extend coverage (e.g., in informal urban areas or remote rural regions) through cooperation with local microinsurance providers;
- a complement to social insurance in order to cover additional costs, such as the cost of essential drugs or transportation to health centres in remote areas; and
- a supplement to social insurance that either provides additional benefits, such as supplementary retirement pension, or covers additional risks, such as those related to climate extremes and disasters.

2.2.3 Social health protection

A cornerstone of national social protection floors, as defined by the ILO Social Protection Floors Recommendation, 2012 (No 202), Paragraph 5, is guaranteed “access to a nationally defined set of goods and services, constituting essential health care, including maternity care, that meets the criteria of availability, accessibility, acceptability and quality” (ILO, 2012b). This entails development of social health protection schemes and effective coverage of health services. Social health protection refers to a “series of public or publicly organised and mandated private measures against social distress and economic loss caused by the reduction of productivity, stoppage or reduction of earnings or the cost of necessary treatment that can result from ill health” (ILO, 2008). Mechanisms to finance health services include taxes, contributions to social health funds and premiums for mandated or regulated private health insurance schemes, like community-based non-profit health insurance and commercial health insurance (ILO, 2008).

2.2.4 Livelihood development approaches

Integrated social protection programmes, often referred to as productive safety nets, combine social assistance instruments with livelihood promotion measures, such as skills development, support to entrepreneurship and improved access to financing, index-based insurance and agricultural extension services. When integrated with climate change adaptation and disaster risk reduction measures, livelihood approaches to social protection can enhance the adaptive capacity of poor and socially marginalised groups.

Social investment funds have been used extensively by the international development community to directly channel investments to vulnerable communities in various forms, including poverty reduction and risk management programmes (e.g., post-disaster relief and safety nets), among others (Horstmann and Schulz-Heiss, 2014). They are quasi-autonomous “agencies that appraise, finance, and supervise implementation of social

investments identified and executed by a wide range of actors, including local governments, nongovernmental organisations (NGOs), local offices of line ministries, and community groups” (Bhatia, 2005).

2.3 Social protection frameworks for addressing climate-related risks

Different authors and organisations use various frameworks to describe the core functions of social protection in relation to climate risk management. The “shock-responsive” social protection framework, which is used by the humanitarian aid community, offers an integrated response to “structural crisis needs” related to addressing chronic poverty through long-term social protection interventions, “seasonal crisis needs” emerging from seasonal variations that place vulnerable people in need of short-term social assistance, and “humanitarian crisis needs” triggered by an event that leads to a humanitarian emergency (OPM, 2015).

The “3As” model of Ulrichs and Slater (2016) links social protection with the resilience thinking. It builds upon the approach proposed by Bahadur et al. (2015) and is designed to analyse the potential of development programmes to build resilience to shocks and stresses. The 3As framework has three components:

- adaptive capacity, which is understood as “the ability of social systems to adapt to multiple, long-term and future climate change risks, and also to learn and adjust after a disaster”;
- anticipatory capacity, which refers to “the ability of social systems to anticipate and reduce the impact of climate variability and extremes through preparedness and planning”; and
- absorptive capacity, which is described as “the ability of social systems to absorb and cope with the impacts of climate variability and extremes” by “using available skills and resources” (Bahadur et al., 2015).

The 3As framework has been used to assess the contribution of safety net programmes to resilience building in Ethiopia, Kenya and Uganda (Ulrichs and Slater, 2016; Ulrichs et al., 2019).

The “3P” framework has, perhaps, the widest recognition in published literature (e.g., Davies et al., 2013; Devereux and Sabates-Wheeler, 2004; Kuriakose et al., 2013). It distinguishes three categories of social protection instruments based on their objectives: ex-ante preventive measures against shocks, ex-post protective actions against disasters and climate variability, and promotive interventions aimed at building long-term adaptive capacity.

Though there are differences between the shock-responsive framework, the 3As framework and the 3P framework, what lies at the heart of all three is the understanding that social protection has the potential to help poor and marginalised people to cope with shocks, reduce their vulnerability to future stress and strengthen their long-term adaptive capacity. The following two sub-sections define the frameworks that are relevant to the analysis presented in this paper.

2.3.1 Adaptive social protection

The World Bank recently piloted a climate-responsive social protection programme – the Sahel Adaptive Social Protection Program (World Bank, 2012). The adaptive social protection (ASP) framework, originally proposed by Davies et al. (2008), is grounded in the concept of transformative social protection introduced by Devereux and Sabates-Wheeler (2004).⁴ ASP takes into consideration that extreme events and gradual changes in climate conditions are of a major concern for eliminating the root causes of vulnerability – chronic poverty and inequality. The concept has been developed for the context of rural vulnerability to climate extremes and variability in agricultural regions.

The ASP model links social protection, climate change adaptation and disaster risk reduction and considers temporal (from the short to the long term) and spatial scales (Davies et al., 2013). The most important feature of ASP is the conceptual distinction between coping and adaptive capacity that moves social protection from a shock-responsive measure to an adaptive and transformative strategy (Béné et al., 2018). In particular, Davies et al. (2013) distinguish four ASP social protection categories:

- Protective (coping strategies) – *ex-post* interventions that help vulnerable people manage the impact of climate shock,
- Preventive (coping strategies) – *ex-ante* measures to mitigate risk,
- Promotive (building adaptive capacity) – *ex-ante* interventions that promote resilience and create opportunity;
- Transformative (building adaptive capacity) – strategies that can transform social relations.

The strength of the ASP framework is the broad conceptualisation of vulnerability and resilience, which allows it to be adapted to the L&D context (see Section 2.3.2). Moreover, the framework creates a basis from which to develop long-term comprehensive social protection strategies and opens up space for their integration with wider climate and development policy frameworks across levels of governance.

2.3.2 Social protection as a risk retention tool in the L&D discourse

Social protection emerges as a tool to address L&D in the CRM framework proposed by Roberts and Pelling (2018). Based on risk layering, the framework integrates both pre-existing and novel tools that address a broad range of climate-related risks – from short-term extreme events to long-term gradual changes – with the ultimate goal of reducing vulnerability and promoting sustainable development. In particular, the CRM model

4 Devereux and Sabates-Wheeler (2004) define the term “transformative social protection” as measures that “seek to address concerns of social equity and exclusion” in response to “power imbalances in society that encourage, create and sustain vulnerabilities”.

combines approaches to avoid and minimise L&D (through climate change adaptation and disaster risk reduction) and address residual impacts.

Adaptation refers to “the process of adjustment to actual or expected climate and its effects” and “[i]n human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities” (IPCC, 2014). Most climate change adaptation actions to date can be classified as incremental, “where the central aim is to maintain the essence and integrity of a system or process at a given scale” (IPCC, 2014). However, there is a growing recognition of the need of transformational adaptation that “changes the fundamental attributes of a system in response to climate and its effects” (IPCC, 2014). Such approaches include large scale interventions, novel adaptations, and fundamental transformation, like planned relocation (Kates et al., 2012).

Risk reduction is “a policy goal or objective, and the strategic and instrumental measures employed for anticipating future disaster risk; reducing existing exposure, hazard, or vulnerability; and improving resilience” (IPCC, 2014). Structural and non-structural risk reduction measures, such as disaster-proofing existing infrastructure and developing early warning systems, can be effective in mitigating the impact of extreme climate events.

Response, recovery and reconstruction approaches are commonly used in disaster risk management and include measures such as humanitarian assistance, reconstruction of physical infrastructure by “building back better”, and post-disaster livelihood improvement programmes. The effectiveness and long-term impact of post-disaster programmes can either enhance or limit the capacity of affected people to respond to future risks.

Under this conceptualisation, social protection is defined as a risk retention measure that can support wider climate change adaptation and disaster risk reduction policies to avoid and minimise impacts of both rapid onset events and SOEs and increase the resilience of vulnerable people to residual L&D.

3 The potential of social protection as a strategic response to slow onset events

Building upon the CRM framework, this section explores the potential of social protection to address L&D associated with SOEs by reducing vulnerability, building adaptive capacity and promoting long-term resilience (as framed in Section 1.1). Applying the ASP categorisation of social protection tools to the CRM framework, it is assumed that preventive and promotive social protection measures can help avoid and minimise L&D from SOEs. These preventative and promotive measures include, for example, livelihood diversification and improved access to financing. Protective interventions like social assistance programmes will be necessary to respond to residual L&D that will occur at uncertain points of time in the future. Transformative approaches can contribute to building adaptive capacity of social systems over long periods of time.

3.1 Building adaptive capacity through social inclusion

Overall, existing social protection programmes rarely incorporate long-term climate risk considerations. Consequently, clear empirical evidence on the benefits of social protection

in addressing inequality related to the impacts of SOEs cannot be found in the published literature. Nevertheless, studies suggest that schemes such as cash transfers, PWPs and microinsurance can promote social inclusion and empower vulnerable people when integrated within a wider policy framework to address poverty and inequality (Deblon and Loewe, 2012; Druza, 2016; Gooding and Marriot, 2009; Jakimow, 2014). These include, for example, laws that delegate land and water use rights to disadvantaged groups and livelihood development interventions, like agricultural extension services. If climate-proofed and properly designed, social protection constitutes a strategic tool to promote participation and improved access of deprived people to resources and opportunities, and hence strengthen their adaptive capacity. An important consideration in this respect is that social protection policies and programmes should place poor and marginalised people at the centre of decision-making (Johnson et al., 2013). Microinsurance and community-based social protection programmes can provide an effective means of promoting participation, since these are bottom-up approaches.

To date, research on social protection and climate change dedicates less attention to the needs of socially marginalised people. Yet, social groups, like people with disabilities, in developing countries are at a higher risk of multidimensional poverty, unemployment and social exclusion than healthy individuals (Mactaggart et al., 2018; Mitra et al., 2013). The risk is greater for those who are highly exposed to the impacts of climate change, such as disabled people living in urban slums or those dependent on depleting natural resources for a living. Moreover, while migration is considered by many to be an adaptive response to the impacts of SOEs, people with disabilities have a lower level of mobility. Evidence suggests that social protection schemes, such as cash transfers, non-contributory health insurance programmes, and vocational training can improve their access to basic income and services (Palmer, 2013), but are less effective in enhancing their livelihood in the long term due to inadequate support (Banks et al., 2017). Hence, social protection has the potential to strengthen the adaptive capacity of people with disabilities, but vital preconditions for the impact of interventions are adequacy of support, integration of climate risks (SOEs) into programme design, and stronger consideration of the risks to people with disabilities in the national and local climate change adaptation plans.

Likewise, empirical evidence reveals that women in poor countries are likely to have less access to social protection than men due to social and cultural norms (Kukrety and Mohanty, 2011). Women and female-headed households living in poverty are disproportionately affected by climate change owing to a wide range of inequalities that condition their high vulnerability, for example, unequal employment opportunities, limited control over productive assets and little decision-making power (Rao et al., 2019). Moreover, SOEs in rural areas such as persistent drought and desertification, increase the risk of conflicts over resource use, which can affect women's security and access to water and wood for domestic use (Rao et al., 2019). Empowering vulnerable women and improving their access to assets, resources, knowledge and market opportunities can strengthen their resilience and ability to meet the challenges of climate change (Goh, 2012). In recent years, many donor organisations have been applying gender-sensitive approaches to social protection, disaster risk reduction and climate change adaptation. Nonetheless, these programmes are often implemented in isolation and hardly consider the whole risk continuum – from climate extremes to SOEs. Still, the long-term effects of SOEs, like land and forest degradation, in rural areas can have a significant impact on power and gender relations. In this regard, the SOEs-inequality linkages and the potential role of social protection in empowering

disadvantaged groups in a changing climate need to be examined and integrated into policy and planning.

3.2 Reducing vulnerability by addressing multi-dimensional poverty

Food security and nutrition

A number of studies report that social assistance schemes can “reduce poverty as measured by the headcount ratio and poverty gap index” (Tirivayi et al., 2013). A larger body of literature shows that cash transfers can increase household food expenditure and help improve health, nutrition and overall food security particularly in rural areas (Bastagli et al., 2019; Bastagli et al., 2016; Miller et al., 2011; Skoufias et al., 2013; Tirivayi et al., 2013). Similarly, research on the effectiveness of large PWP to increase household food security, such as Ethiopia’s Productive Safety Net Program, indicate an increase in food intake (Gebrehiwot and Castilla, 2019).⁵ In some locations, the losses associated with SOEs might relate to a loss of traditional foods and reduced access to nutritious diets and clean drinking water. Consequently, social protection programmes need to be adjusted to ensure secure access, availability and utilisation of food. In relation to this, some authors argue that positive impacts on child nutrition and household dietary diversity can be achieved through safety net programmes extended to education and awareness raising activities (Gebrehiwot and Castilla, 2019).

Health and education

Conditional cash transfers, in-kind food and school-related transfers are instruments to increase access of the poor to health and education, and transform people’s behaviour, and as such they could have a long-term impact on households’ resilience to climate change. For instance, conditional cash transfers are a promising way to encourage health preventive behaviour (e.g., Evans et al., 2014; Lagarde et al., 2009), finance health insurance payments (Evans et al., 2014) and address inequalities in the access of poor and vulnerable people to health services. Cash transfers have also been linked to increased school enrolment and attendance (Bastagli et al., 2019; Bastagli et al., 2016; Evans et al., 2014; Tirivayi et al., 2013). Yet, considering the potential impact of SOEs on households’ food and income security and connectivity in remote locations, these programmes should be climate-proofed and linked to other key sectors (e.g., health, education and infrastructure).

Human mobility

Human mobility represents a risk management strategy in many regions vulnerable to the physical impacts of climate change (e.g., see Milan et al., 2016). Recent projections indicate that by 2050 over 143 million people in Sub-Saharan Africa, South Asia and Latin America could be forced to migrate within their national borders because of the impacts of SOEs on these regions (Rigaud et al., 2018). Migration can be a successful adaptation strategy for poor and socially marginalised people (e.g., see Afifi et al., 2016) when supported by

5 Ethiopia’s Productive Safety Net Program, implemented under the national Food Security Programme, supports chronically food-insecure households with seasonal employment and additional social assistance.

effective social protection mechanisms (Schwan and Yu, 2018). A small body of studies provides evidence that social assistance schemes, like cash- and asset transfer programmes, can be a disincentive for people to move to other locations, but can also reduce the vulnerability of those who do take the decision to migrate (Johnson and Krishnamurthy, 2010; Schwan and Yu, 2018). Schwan and Yu (2018) argue that social assistance programmes with climate risk considerations, such as programmes that encourage livelihood diversification in agriculture-dependent areas affected by climate change, can “reduce distress migration and erosive coping strategies”. However, there are situations in which not every individual who wants to relocate can employ migration as an adaptation strategy (“involuntarily trapped” populations). Different constraints may influence the ability to move, like extreme poverty or a remote location (e.g., see Afifi et al., 2016; Schraven et al., 2019; Simonelli, 2016). In other situations, immobility could be voluntary, therefore policy responses, such as assisted migration, should ensure to not affect the sovereignty of the people (Ayeb-Karlsson et al., 2018). The identification of context-specific and human rights-sensitive social protection policies is, therefore, crucial for supporting trapped populations in regions exposed to a high risk of L&D from SOEs.

Poverty and climate change-related policies

Developing social protection policies to support the implementation of national climate change strategies can help “negotiate the trade-offs between addressing climate change and addressing poverty” (Heltberg et al., 2009). For instance, a survey of literature on social protection and forest-dependent livelihoods discloses that social protection instruments can be used to promote forest conservation and can have a positive impact on income generation and diversification, food security and school attendance (Tirivayi, 2017). Some countries like China and Brazil have in place social protection programmes specifically designed to address the risks to the poor emerging from ongoing pro-climate reforms in the forestry, agriculture and energy sectors (ILO, 2017). Specific social protection instruments include social assistance, unemployment benefits and skills development programmes.

3.3 Building resilient livelihoods

3.3.1 Agriculture-based livelihoods

There is a significant body of literature that examines the role and effectiveness of different social protection programmes in supporting agriculture-based livelihoods. For instance, a comprehensive review of the empirical literature on the impact of social protection programmes on agriculture and rural development reveals that social protection interventions, like cash transfers, PWPs and pension programmes, have the potential to increase agricultural output by encouraging investment in agricultural assets, including livestock, land and farm tools, though the research evidence is highly limited; increase household expenditures for improved crop production, like fertiliser, seeds and hired labour; influence labour reallocation between agricultural and non-agricultural sectors, and formal and informal employment; benefit local trade but distort local prices, wages and labour supply in productive sectors (Tirivayi et al., 2013). Similarly, studies from Malawi (Miller et al., 2011) and Mexico (Skoufias et al., 2013) demonstrate that cash transfers can improve

overall food security in rural areas. Cash transfers can also increase non-food expenditures and promote a shift towards non-agricultural activities (Skoufias et al., 2013). A limited number of studies link social protection instruments, like safety nets and insurance programmes, with increased risk-taking behaviour, like off-farm investments in informal enterprises or self-employment ventures (Tirivayi et al., 2013).

Weather-indexed insurance, which could be a suitable tool to address L&D from some SOEs, such as increasing temperatures and water scarcity, is considered an innovative approach that integrates social protection, climate change adaptation and disaster risk reduction (Davies et al., 2013). Even though this risk instrument has limited applicability in dealing with a broader range of risks, like loss of ecosystems and sea level rise, index insurance can contribute to preventing vulnerable people from falling into (extreme) poverty after experiencing climate-related shocks. Pro-poor and human-rights oriented meso-insurance services delivered by community-based organisations can make climate risk insurance more accessible and more affordable for poor and vulnerable people (Matias et al., 2018).

Several studies underscore the potential of large-scale national social protection programmes for building resilience to climate risks. For example, Ulrichs et al. (2019) find that mass cash transfer programmes in Ethiopia, Kenya and Uganda can “make a strong contribution to the capacity of individuals and households to absorb” and anticipate the impacts of climate extremes. An evaluation of Kenya’s Hunger Safety Net Programme reveals that the interventions implemented during a severe drought significantly reduced multidimensional poverty levels especially among the ultra-poor households.⁶ The highest impact was in the food security domain, but the programme also helped beneficiaries to accumulate savings, to access healthcare, loans and credit and to strengthen social networks (Song and Imai, 2019). Similarly, assessment results of the Mahatma Gandhi National Rural Employment Guarantee Act show that the programme has the potential to increase the resilience of the rural poor to climate extremes (Godfrey-Wood and Flower, 2018) through positive impacts on agricultural wages, the gender pay gap, migration, access to health services and acquisition of productive assets (Jakimow, 2014; Reddy et al., 2014). Moreover, the public works under the programme relate to improving rural infrastructure and services (e.g., rural connectivity, water management, flood and drought prevention measures, among others). Thus, PWP’s could be a suitable measure to reduce the socio-economic and physical vulnerability of communities to risks related to SOEs, such as water scarcity and loss of agricultural productivity.

A comprehensive and integrated portfolio of social protection interventions can help address the complex impacts of SOEs on the rural poor (Aleksandrova, 2019). Studies have shown that social protection interventions in rural areas are more effective when they provide multiple, long-term benefits. For example, integrated schemes, like the Ghana Livelihood Empowerment Against Poverty programme, that combine cash transfer programmes and health insurance schemes targeting extremely poor households have been linked to increased savings and reduced debt/loan holdings of female-headed households, as well as trends towards improved farm productivity and strengthened social networks (Handa et al.,

6 Kenya’s Hunger Safety Net Programme was designed to provide bi-monthly cash transfers and additional drought emergency cash transfers in response to the increasing frequency of droughts and their impact on chronic food insecurity and conflict over resource scarcity.

2014). A recent study on the collective impacts of two social protection programmes in Ethiopia – Ethiopia’s Productive Safety Net Program and Community Based Health Insurance Scheme – finds that participation in both programmes is linked to lower debt, an increased use of “modern health care facilities”, a larger labour supply and more livestock assets (Shigute et al., 2019). Another case study from Ethiopia underlines that people covered by the Ethiopia’s Productive Safety Net Program and provided with supplementary agricultural support “are more likely to be food secure, to borrow for productive purposes, use improved agricultural technologies, and operate non-farm own business activities” (Gilligan et al., 2009).

To date, most social protection programmes in developing countries have focused on agriculture-based livelihoods. While not explicitly linked to SOEs, the empirical evidence described above points to the clear potential of existing social protection models to build resilience of vulnerable populations in agricultural regions. Effective approaches need to combine traditional social protection schemes (e.g., PWP, cash transfers) with climate risk-responsive measures (e.g., climate-proofing community infrastructure, index-based agricultural insurance, ecosystem-based adaptation) and pro-poor livelihood development programmes (e.g., agricultural extension services, income diversification support, microfinance schemes). However, attention must be given to understanding the risks associated with SOEs at the local level and integrating these risks into targeting mechanisms and programme design. For instance, a holistic analysis can capture the possible effects of SOEs on local infrastructure and access to services, local economy and poverty levels, and conflicts over depleting natural resources.

3.3.2 Fisheries-based livelihoods

The impacts of SOEs on coastal regions, such as loss of community land due to sea level rise, declining fish stocks and salinisation of freshwater resources, coupled with nature conservation policies will likely have major implications for poverty reduction, migration and security (e.g., conflicts over resources). Fisheries-based livelihoods are already confronted with changes in fish stock distribution and quantity, damages to physical assets, financial losses, increased exposure to health hazards, and food insecurity (Badjeck et al., 2010). Still, research and policy discussions on effective ways to address these challenges are scarce (Badjeck et al., 2010; Béné et al., 2015).

Small-scale fishers, employees in the fish processing industry and people working informally in the sector receive significantly less social protection support in comparison with farmers and pastoralists (Béné et al., 2015). The most common form of social protection in the sector is social assistance following a major disaster (such as a cyclone) including cash transfers, public works and post-disaster rehabilitation (e.g., provision of equipment and repair of infrastructure). Insurance against natural disasters for small-scale aquaculture has also been promoted in recent years. Overall, however, current social protection programmes in developing countries does not foresee actions to respond to the projected impacts of SOEs in coastal regions.

Yet, social protection can be an important component for building the resilience of fisheries-based livelihoods. Potential social protection interventions include measures to reduce vulnerability to input and output price volatility along the fisheries value chains and

compensation programmes to assist people affected by unemployment due to environmental policies (Béné et al., 2015). Microinsurance schemes can be effective in reaching informal workers, especially women who are largely employed in the sector. Because of their “double-dividend” feature, PWPs can provide income security while averting/minimising L&D from SOEs through resilience-building programmes, such as mangrove afforestation and protection projects. When climate-proofed, social health protection systems can mitigate the impact of SOEs on human health and access to healthcare. This requires climate-aware and cross-sectoral planning. For example, sea level rise is already affecting the connectivity in many low-lying coastal regions and social protection measures alone cannot ensure access to health care. Finally, social protection interventions could be designed to facilitate transformational adaptation to support fisherfolk who might lose their homes and traditional way of living; these would include livelihood diversification and planned relocation programmes, among others.

3.3.3 Urban livelihoods

The number of poor and marginalised people living in cities is growing (World Bank, 2015). The impacts of SOEs, like heat waves and water shortages, on the urban poor have already been linked to increasing risks to health (e.g., heat-related morbidity and water-borne diseases), loss of jobs and income opportunities, and food insecurity, among others (Revi et al., 2014). Migration to cities further forces many poor and marginalised people to live in informal settlements without access to basic infrastructure and services, and traditional safeguard mechanisms. The urban poor and disadvantaged groups receive support mainly in the form of social safety nets (such as unconditional cash transfers and targeted food and energy subsidies) and slum upgrading programmes (World Bank, 2015). Moreover, in low and lower middle-income states, social protection coverage in urban areas is more limited in comparison to agricultural regions where social protection programmes increasingly promote livelihood diversification, access to insurance and agricultural extension services.

Likewise, the published literature on social protection and climate change seems to have a limited focus on urban areas (Aleksandrova, 2019; Schwan and Yu, 2018). Depending on their design, social protection instruments, like PWPs, cash transfers, slum upgrading programmes and subsidies, can help reduce urban vulnerability to climate change as these measures provide basic income, and secure access to food, energy and safer housing. Nevertheless, a comprehensive set of social protection measures can contribute to building resilient urban livelihoods particularly when integrated with long-term climate change adaptation and disaster risk reduction strategies and plans for cities (Aleksandrova, 2019). On the one hand, social protection programmes can be linked to the implementation of planned activities. For example, the South African Expanded Public Works Programme goes beyond traditional PWPs focused on the infrastructure sector by offering employment in the social and environmental sectors (e.g., provision of services for old people, maintenance of public parks, and works related to forest fire prevention) (McCord, 2017). This model can be adapted to respond to emerging challenges associated with SOEs by linking climate change adaptation with PWPs. Numerous ways forward can be found in the literature on urban climate change adaptation, such as implementing nature-based solutions for heat waves and water stress. On the other hand, urban adaptation and disaster risk reduction plans need to incorporate considerations for strengthening the resilience of people currently in need of social protection and those at risk of social marginalisation and poverty

because of SOE impacts. For instance, interactions exist in the policy areas of providing adequate housing, jobs, basic services and nutritious food to the poorest.

Extending the coverage of state social protection programmes is the best solution to build long-term resilience to climate change, but may be slow to materialise in some developing countries. Near-term solutions are urgently needed. For instance, many poor urban dwellers, especially informal migrants, remain excluded from formal social insurance and social health protection schemes. Improved access to microfinance in urban areas, designed to promote resilience to climate change, can be a feasible near-term option. Also, PWPs that create long-term job opportunities and support skills development can be an effective tool to strengthen the adaptive capacity of the urban poor. Here, it is important to highlight that creating formal labour demand is an essential element of poverty reduction efforts that can also help vulnerable people access formal social protection mechanisms. Since designing large PWPs with mass coverage requires significant financing, small community-based employment projects could be a more feasible way to reach marginalised urban groups. In addition, community-based programmes can help create a social cohesion in neighbourhoods with new urban dwellers. These policy dimensions are highly relevant to local contexts where rural out-migration to cities or migration within urban boundaries, including due to impacts of SOEs, is observed and expected.

Table 1: Social protection interventions for addressing loss and damage from slow onset events – selected examples	
Context	Policy options/instruments
Agriculture-based livelihoods	<ul style="list-style-type: none"> ▪ Increasing the access of the poor to microinsurance (weather-indexed insurance) ▪ Livelihood promotion and diversification programmes: extension services for the most vulnerable farmers and in-kind transfers (e.g., seeds, tools) ▪ Integrating climate risk considerations into social assistance programmes (e.g., in targeting mechanisms and design of schemes) ▪ PWPs combined with afforestation projects ▪ Cash transfer programmes combined with health insurance schemes to extend the coverage of people with access to health protection
Coastal communities and fisheries-based livelihoods	<ul style="list-style-type: none"> ▪ Livelihood promotion and diversification programmes: extension services for fish farmers and fishers, such as trainings for sustainable fishing, and in-kind transfers (e.g., fishing nets); support establishing/strengthening capacities of fisheries-based organisations ▪ Social transfers and skills development programmes for people affected by environmental policies in the fisheries sector ▪ Microinsurance schemes for extending the risk coverage and reaching informal workers in the sector ▪ PWPs integrated with ecosystem-based adaptation programmes, such as mangrove forest restoration ▪ Social health protection programmes integrated with local development plans for the infrastructure and health sectors ▪ Social transfers for planned relocation
Urban livelihoods	<ul style="list-style-type: none"> ▪ Integrating social protection objectives and specific measures in urban adaptation and disaster risk reduction plans (e.g., in the policy areas of housing, employment, food security and access to basic services) ▪ Food and energy subsidies ▪ Improved access to microfinance ▪ PWPs that create long-term job opportunities and support skills development (e.g., small community-based employment projects)
Source: Author	

4 Emerging issues for research and policy

A large body of literature has already established the role of social assistance programmes in reducing the vulnerability of the poor to climate extremes, particularly in agricultural regions. There are significant knowledge gaps in the evidence on the linkages between social protection and long-term climate change impacts on inequality and vulnerability (especially of fisheries-based and urban livelihoods) in developing countries. Nonetheless, consistent with previous findings (e.g., Ulrichs et al., 2019), the review presented in this paper suggests that social protection has the potential to contribute to strengthening the resilience of the poor to climate-related shocks even without being climate-proofed. Yet, this paper argues that to translate this potential into an effective strategy to address L&D from SOEs, countries and donors should work towards establishing national social protection systems with integrated climate risk considerations; design climate-responsive social protection mechanisms as an integral part of a long-term CRM strategy; and link social protection with development interventions in other sectors, such as infrastructure, agriculture and health. To this end, a number of issues for research and policy emerge (which are summarised in Table 2).

Existing social protection mechanisms should be improved and adapted to risks emerging from SOEs. The impact of social protection programmes depends on the socio-economic context, gender relations and the design of the schemes (e.g., targeting and delivery mechanisms, value and duration of the cash transfer, among others) (Tirivayi et al., 2013). To improve the effectiveness of social protection systems in a changing climate, future programmes should build on a robust understanding of the ways in which SOEs might undermine desired outcomes. Loss of biodiversity, land and forest degradation, desertification, sea level rise and acidification, and the salinisation of land and water resources are all environmental changes that will likely have a deep social impact in many vulnerable states. Research should explore, in particular, the impacts on social equality, multidimensional poverty and long-term, intergenerational resilience. In addition, more research is needed to study the risk of maladaptation as a result of social protection interventions. Some authors link social protection instruments, like safety net programmes and microfinance, with potential maladaptation outcomes (Weldegebriel and Prowse, 2013).

It is essential to advance the theoretical and empirical work on identifying these climate-responsive social protection actions that can support long-term resilience and sustainability. To date, the vast majority of social protection programmes in poor states are safety nets that are seen primarily as post-disaster assistance, and it is debated to what extent these programmes have the potential to address intergenerational poverty and support long-term resilience building (e.g., Davies et al., 2013; Ulrichs et al., 2019). Yet, it has been widely acknowledged that social protection can help vulnerable people to respond to shocks and prevent the use of adverse coping strategies (e.g., the sale of productive assets) (Tirivayi et al., 2013), and hence, strengthen their absorptive capacity (Ulrichs et al., 2019). Therefore, safety nets should be considered an important element of climate-responsive social protection systems. Importantly, medium- to long-term programmes, like skills development, employment guarantee schemes, access to (micro)finance, social transfers for planned relocation and social integration, will be crucial to support vulnerable groups.

More empirical research is needed to discover how to best design finance and insurance schemes to serve the poor and the extremely poor and cover informal sector

workers and remote regions. While microinsurance dominates the discussions in the social protection and climate change literature, other finance instruments, like microcredit and social insurance, might be more suitable approaches in the case of SOEs. Particularly, social insurance provides a framework for long-term, intergenerational social protection in relation to life-cycle risks, while microcredit allows for investment in productive assets and resilience.

Further knowledge is needed to understand the impact of SOEs on social equality and the potential role of social protection in empowering socially marginalised groups in a changing climate. To date, research on social protection and climate change gives little consideration to the vulnerabilities and needs of socially marginalised groups, such as women, children, ethnic minorities and people with disabilities. There are two central questions in this context. What social protection policies and specific measures are necessary to reduce the vulnerability and strengthen the adaptive capacity of disadvantaged people considering the risk of SOEs? And, how can these measures/policies be best integrated with national and local climate change adaptation plans?

Research and policy should question whether environmental protection policies, disaster risk reduction and climate change adaptation interventions reduce or increase the vulnerability of people in need of social protection to SOEs in the long-term. Positioning social protection as a core element of green growth strategies is essential to ensure that economically and socially vulnerable people are not negatively affected by climate change adaptation and mitigation actions. In this regard, the scientific community may support, for example, impact evaluations to investigate the impacts of climate change policies on the livelihoods of agriculture- and fisheries-dependent people and those in urban areas and research on how social protection instruments should be designed to promote climate resilience and green growth.

Deeper knowledge is needed of the institutional set-up, investment needs and financing options for integrating the risk of SOEs in the social protection sector. Aleksandrova (2019) derives the following principles and considerations for mainstreaming climate risk into national social protection frameworks: assess and acknowledge climate-related risks and uncertainties; establish social protection systems that facilitate both incremental and transformational adaptation; recognise the greater need for climate-responsive social protection among socially marginalised groups; identify rural- and urban-specific measures, including strategies to address migration; facilitate a just transition to a green economy; establish a comprehensive set of public and private mechanisms to build climate-resilient social protection systems; and promote policy coherence, institutional coordination and participation.

Integrating multiple objectives for avoiding, minimising and addressing residual L&D from SOEs into existing social protection programmes will require significant time and technical, financial and institutional capacities. This will challenge the social protection systems in poor states as they lack these capacities (Ulrichs et al., 2019). In view of these challenges, future analytical work may explore which institutional structures are required to link CRM frameworks with social protection systems and explore the cost-effectiveness of different institutional models. Here, it must be highlighted that vertical coordination and local action are particularly important when designing climate risk-responsive social protection programmes because impacts of climate change are

experienced locally. In this regard, it is worth “examining how [...] social protection policies [can] promote private sector participation and local level action on climate change that can mobilise resources and strengthen local level capacities” (Aleksandrova, 2019).

Innovative and transformational approaches to social protection need to be explored.

This study underscored that the issue of transformation in the context of social protection and SOEs can be viewed from different angles. First, social protection can be an integral part of proactive, transformative adaptation measures that help avoid and minimise L&D. For example, social protection instruments can be designed to support innovative livelihood strategies aimed at reducing communities’ dependence on agriculture and protecting vulnerable ecosystems with the ultimate goal to minimise L&D associated with land degradation and loss of biodiversity. Second, social protection can facilitate transformative responses to residual L&D. For instance, people who experience loss of traditional livelihood activities and lifestyle because of a fundamentally altered environment or forced relocation will need support and protection to learn new skills, establish new social relations and find new economic opportunities. Third, social protection can be instrumental in transforming social relations (e.g., through the promotion of social inclusion) and behaviour (e.g., conditional cash transfers can encourage investment in health, education and long-term resilience). Fourth, institutional transformation might be needed to integrate social protection with other policy spheres and establish new governance models that open up space for public-private social protection mechanisms. Future research should further explore these dimensions by, for example, examining the transformative function of social protection in relation to L&D from SOEs and identifying system-level measures that will facilitate transformative social protection.

Table 2: Priorities for research on social protection and climate change with a focus on slow onset events	
	Research questions
Descriptive	<p>What are the risks created by SOEs to people in need of social protection (e.g., look into impacts on social equality, multidimensional poverty and long-term, intergenerational resilience)?</p> <p>Who will need social protection because of SOEs and why?</p> <p>How can climate change/SOEs affect social protection interventions?</p>
Policy	<p>What policies, institutions, measures and resources are needed in the social protection sector to address SOEs?</p> <p>What capacity do states have at the national and local levels to implement interventions?</p> <p>Which climate-responsive social protection policies can support long-term resilience and sustainability?</p> <p>What is the best approach to integrate climate risk into existing national social protection frameworks?</p> <p>Which governance models can enable effective delivery of social protection interventions and L&D-related objectives?</p> <p>Which policies and regulations in the social protection sector can support or undermine efforts to address L&D from SOEs?</p> <p>How can social protection policy objectives be aligned with other development goals (at the global, national and local levels)?</p> <p>Which stakeholders should be engaged in planning and implementing measures?</p>
Implementation	<p>Which instruments are suitable for responding to climate impacts along the entire risk continuum (climate extremes, slow onset changes)?</p> <p>How can climate-responsive social protection schemes be designed to be most effective (e.g., targeting and delivery mechanisms, conditionality, value and duration of cash transfer)?</p> <p>What is the most cost-effective option considering the long-term impacts (costs) of climate change?</p> <p>How can the impact of social protection measures on the capacity of people to respond to climate-related risks/adapt to climate change (and avoid maladaptation) be best assessed?</p>
Source: Author	

5 Outlook

This study explores the potential of social protection to address L&D from SOEs by looking into the multiple dimensions of poverty, inequality and resilience. The paper represents, to the author's knowledge, the first effort to link social protection research and practice with the L&D policy agenda on SOEs. Due to the limited number of studies to date that explicitly connect various SOEs with social protection interventions, this discussion draws primarily on conceptually grounded argumentation.

A vast body of literature establishes the critical role of social protection in strengthening the coping and adaptive capacities of poor and socially marginalised people. Therefore, vulnerable countries should improve the effectiveness and extend the coverage of existing social protection systems. Nevertheless, to respond to the multiple challenges related to SOEs, countries should not only strengthen existing social protection mechanisms, but also mainstream climate risk concerns into their social protection frameworks. To this end, a robust understanding of the effects of climate change on the social protection sector is essential.

Moreover, the complexity of the risks emerging from SOEs necessitates the integration of the sector with broader climate and development policies and strategies. Considerable opportunity exists for alignment of poverty reduction measures with climate change adaptation through social protection. National Adaptation Plans can facilitate these integrative processes. In addition, it must be emphasised that SOEs will adversely affect peoples' ability to work. For instance, rising temperatures can affect the health of workers in the agriculture and construction sectors, and sea level rise can reduce access to jobs in coastal regions. In this regard, future work on social protection and SOEs should be extended to capture labour market interventions. That said, a pursuit of a broader framework for the role of social protection in the L&D action agenda coupled with greater policy integration can help address L&D from SOEs more effectively.

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