

## Climate-Responsive Social Protection

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Background Paper for the World Bank 2012–2022 Social Protection and Labor Strategy



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# **Climate-responsive Social Protection**

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## **Abstract**

In the years ahead, development efforts aiming at reducing vulnerability will increasingly have to factor in climate change, and social protection is no exception. This paper sets out the case for climate-responsive social protection and proposes a framework with principles, design features, and functions that would help SP systems evolve in a climate-responsive direction. The principles comprise climate-aware planning; livelihood-based approaches that consider the full range of assets and institutions available to households and communities; and aiming for resilient communities by planning for the long term. Four design features that can help achieve this are: scalable and flexible programs that can increase coverage in response to climate disasters; climate-responsive targeting systems; investments in livelihoods that build community and household resilience; and promotion of better climate risk management.

**JEL Codes:** O15, Q54

**Key Words:** social protection, climate change, disasters

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[www.worldbank.org/socialresilience](http://www.worldbank.org/socialresilience).

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## **I. WHY SHOULD SOCIAL PROTECTION PROFESSIONALS BE CONCERNED ABOUT CLIMATE CHANGE?**

Climate change will have severe negative impacts on rural and urban populations in developing countries in the decades to come. Increases in temperature and greater variability in rainfall already are being recorded in many regions; projections suggest they will increase through the 21<sup>st</sup> century as the earth is already committed to significant warming. Changes in average temperature and precipitation will reshape the geography of many livelihoods dependent on natural resources, and that of disease vectors, while the greater climate variability will increase uncertainty and disaster risks.

Climate extremes – increased frequency and severity of extreme weather events, such as drought, flooding, heat and cold waves, and intense storms – are a particularly troubling aspect of greater climate variability. According to the Intergovernmental Panel on Climate Change (IPCC) 2011, heat waves and heavy rainfall will increase through the 21<sup>st</sup> century, and it is likely that droughts will intensify and tropical cyclones will become more severe. By the end of the century, a current 1-in-20-year heat extreme is likely to become a 1-in-2-year extreme in most regions. Moreover, unprecedented and unpredictable extremes such as heat, heavy rainfall, or cyclones will spread to areas that have not experienced such events in the past.

The impacts of climate change will shape our world in the decades to come and will be mostly negative. Climate change will make incomes and food prices more volatile, erode certain livelihoods, and cause natural disasters. The negative impacts of climate change will be particularly challenging in the developing world, where they threaten to undermine gains made over the past decades. Some of the communities most vulnerable to the effects of climate change are those in flood plains, those whose economies are closely linked with climate-sensitive resources, and those in areas prone to extreme weather events, especially where rapid urbanization is occurring (Parry et al. 2007). For example, an estimate cited by Mitchell and van Aalst (2011) finds that when taking into account population growth,

changing settlement patterns, and more extreme sea levels, the number of people exposed to coastal flooding in Asia will increase by 50% by 2030 from 2000 levels, threatening their assets and lives. The poor will be particularly disadvantaged as they have less capacity for response and adaptation, and consequently are at increased risk of losing life and assets in climate shocks and of having to rely on adverse coping mechanisms with long term negative implications for human development, such as selling assets, pulling children out of school, and engaging in precarious work. Extreme weather shocks will create large numbers of transitory poor, making it hard for both near-poor and poor households to recover between increasingly frequent disasters.

Social protection (SP) mechanisms are often being called upon to help communities affected by climate-related shocks. In the past decade, SP has assumed a growing role in the Bank's response to both rapid and slow onset disasters, with large scale involvements in Ethiopia, Honduras, Madagascar, Pakistan and other places often in the form of cash transfers and public works to the affected population (Heltberg 2007). An IEG evaluation concluded that "during the recovery process, getting cash support to victims quickly has positively affected people's sense of safety and security. It has been a prominent first sign of the government's support in a time of acute need" (IEG 2006). In Ethiopia, households affected by the 2008 drought received transfers or cash-for-work interventions from the Productive Safety Net Program, which helped improve caloric consumption by 30% compared to non-beneficiary households (World Bank 2010a). In general, these experiences have shown that countries that have SP systems in place before a shock hits are better able to launch more immediate and effective response.

A growing literature and practice recognizes the role of SP as part of climate change adaptation, opening up the possibility for sector investments to benefit from climate finance (Stern 2006 and 2009; Mearns and Norton 2009; UNDP 2007; World Bank 2010b; and Kanbur 2009). A shared understanding is evolving that climate change poses challenges for social policy and that its impacts threaten to undercut the achievements of social protection interventions. By integrating climate and disaster risk considerations into the

planning and design of social protection programs, the sector can help prevent poor and vulnerable households from falling deeper into poverty, reduce their overall risk exposure, and contribute to long term adaptation to climate change. As such, SP can form part of the overall adaptation response alongside interventions in such other sectors as agriculture, infrastructure, and disaster risk management. Social Protection programs also can seek financing from bilateral and multi-lateral funds earmarked for purposes related to adaptation to climate change, which given pledges made at the climate change conferences in Copenhagen and Durban seems likely to be a rapidly expanding area of concessional development assistance.

The preparation of the World Bank's Social Protection and Labor (SP&L) Strategy 2012–2022 represents an opportunity to assess the implications of climate change for social protection. Therefore, the objective of this paper is to present a framework that can help practitioners consider SP from a climate change perspective and identify how the SP sector can contribute to increased resilience to the adverse impacts of climate change. The paper proposes a framework for climate-responsive social protection (CRSP) and identifies key principles for design and implementation, drawing on examples from Ethiopia and Mongolia. In making the case for CRSP, this paper argues that taking climate change into account when planning and designing SP will contribute to climate resilience and adaptation for SP target groups via a broad range of preventive, protective, and promotional functions.

The next section reviews the linkages between climate change and SP and analyzes them in the context of the new SP&L Strategy. Section 3 proposes a framework for climate-responsive social protection laying out a set of principles, design features, and system functions and instruments. Sections 4 and 5 offer case studies from Ethiopia and Mongolia that illustrate the principles and opportunities for CRSP. Section 6 summarizes.



## II. IMPLICATIONS OF CLIMATE CHANGE FOR THE WORLD BANK'S NEW SOCIAL PROTECTION AND LABOR STRATEGY

Social protection plays an important role in addressing some of the challenges arising from climate change within the larger, multi-sectoral adaptation effort. If designed and executed well, SP interventions offer versatile coping mechanisms for climate shocks and natural disasters. In the face of climate change, however, responding to these shocks alone will not suffice; it will also be essential to enhance adaptive capacity (Box 1).

### Box 1: Adaptation, Adaptive Capacity, Resilience: What Is Behind the Terms?

**Adaptation** responses seek to reduce or mitigate adverse impacts of climate change. The IPCC defines adaptation as “adjustment in natural or human systems in response to actual or expected climate stimuli or their effects, which moderates harm and exploits beneficial opportunities” (Smit et al. 2001). Adaptation can be autonomous – meaning households and communities will do it in any case because it is in their self-interest – or planned by governments. Some adaptation measures address specific climatic risks (e.g., seawalls); other measures contribute to decreased vulnerability in general and increased adaptive capacity. Most SP fall in this latter category.

The **adaptive capacity** refers to the ability of a human or natural system to adjust to climate change, including to climate variability and extremes; prevent or moderate potential damages; take advantage of opportunities; or cope with the consequences. The adaptive capacity of a household, region, or country depends on its stock of financial and economic resources, access to technology, information and skills, infrastructure assets, institutional assets, and degree of equity (Smit et al. 2001). Education and economic growth are sometimes referred to as the best way to build adaptive capacity. Many of the factors that enhance adaptive capacity simultaneously promote development and can, potentially, advance social and economic inclusion of the poor.

**Resilience** refers to the ability of a system to undergo stress without incurring damage and to recover. Some observers distinguish between general resilience (to unspecified and unforeseen disturbances) and specified resilience (the resilience “of what, to what”). There can be tension between resilience and adaptive capacity in that resilience denotes persistence of the current state to stress while adaptive capacity can facilitate transformation to a new and more desirable state (Miller et al. 2010).

The new Social Protection and Labor Strategy highlights the importance of social protection for poverty reduction and its contribution to sustainable, inclusive growth through three

functions: prevention, protection, and promotion (World Bank 2010c). While the primary objective of the Strategy is to build resilience and opportunity, it singles out the growing frequency of disasters as a key challenge for SP systems in the decades to come, while recognizing the potential of social protection as an integrated policy response for protecting populations against shocks. Thus, addressing the impacts of climate change is aligned closely with SP objectives and can be incorporated as part of the functions and instruments highlighted in the SP&L Strategy (Figure 1).<sup>1</sup>

**Figure 1: Social Protection and Labor Systems for Climate Resilience**



Source: Authors based on World Bank (2010c).

<sup>1</sup> The 3P framework (Prevention, Protection, Promotion) for SP has been developed by several authors (Sabates-Wheeler and Devereux 2008; Guhan 1994) and now forms the basis of the World Bank's SP&L Strategy. An approach that builds on the 3P framework as the basis for linking Social Protection, Climate Change Adaptation, and Disaster Risk Reduction is the Adaptive Social Protection concept (Davies et al. 2009). The ASP provides a framework for greater integration of SP, CCA, and DRR in both policy and practice as a more effective way of reducing vulnerability to shocks and endemic poverty.

## 2.1 Climate Change and SP Objectives

Social protection policies and programs aim to support risk management and promote opportunities for individuals, while providing a foundation for more resilient households and societies. This objective embodies the need to build resilience against climate shocks and the challenge of creating new opportunities for people whose livelihoods are becoming unviable due to climate change. The impacts of climate change will make SP goals harder to accomplish and has profound implications for the risk profile confronting developing countries that make it necessary to rethink essential questions of SP planning and design such as who to target, what level of coverage and benefits are adequate, and what risks to protect against (Box 2).

### Box 2: Characterizing the Risks Associated with Climate Change

Underlying all social protection efforts is the objective of assisting the poor and the near-poor to manage income and other shocks. While climate has always been risky, ongoing climate changes are transforming the risk profile and shifting it toward the poor in ways that adaptation responses need to take into account, namely:

- *Direct and indirect risks.* The direct impacts of changing climate bring about a range of indirect risks. For example, direct impacts on agricultural production will have indirect consequences for rural incomes, food prices, labor demand, health and nutrition, access to drinking water, deforestation and soil erosion, and settlement and migration. These indirect risks are hard to predict but could surpass the impacts of direct climate risks as they give rise to scale effects. For instance, frequent cyclones in a given area will lead many people to exploit remaining resources in similar ways. Such scale effects create downward pressure both on local producer prices and on the natural resource base itself that exacerbate existing constraints on households, such as assets needed for production (Sabates-Wheeler et al. 2008). Multi-sectoral adaptation strategies are therefore needed.
- *Higher frequency.* Climate change increases the frequency of extreme climate events. More frequent, repetitive risky events will exhaust informal coping mechanisms and rebuilding livelihoods after disasters at shorter intervals may prove impossible. More formal risk management is therefore called for; there may also be a need to rethink targeting strategies to be better tailored to the transitory poor.
- *Covariate risks.* Climate change will exacerbate covariate risks (those affecting entire communities or countries), both direct (disaster; yield declines over large areas) and indirect (vector-borne epidemics; price and employment effects at the regional, national, and international levels). Consequently, localized risk management based on risk pooling or transfers may fall short, and risk pooling or transfers over larger areas – nationally or internationally – using more formal public or market-based instruments will be required.
- *Uncertainty.* There is a great deal of uncertainty about when, where, and how much of the

predicted climate changes will manifest. Uncertainty, however, should not delay action. When confronted with other risks like health, food security, or the threat of terrorism, the response to uncertainty is not inaction as policymakers usually realize the need to minimize the risk of catastrophic losses. The same should be the approach to climate change.

- *Irreversibility.* Absent successful adaptation, several risks associated with climate change could cause irreversible damages to life, assets, and social structures. Irreversible damages to human assets – malnutrition, lost schooling – are no less important than irreversible damages to natural and physical assets and need to be avoided. Improved disaster management and more risk-responsive safety nets can help prevent irreversible human damages and improve disaster recovery.

Taking into account the considerable uncertainties surrounding all climate projections, some observers have argued for “no regrets” adaptation interventions, defined as actions that bring net social benefits under all realistic scenarios of future climate and impacts (Heltberg, Siegel, and Jorgensen 2009). Other observers prefer to use the term “low regrets” adaptation (since there is always an opportunity cost), and note that effective low regrets measures include early warning systems, land use planning, development and enforcement of building codes, improvements to health surveillance, and ecosystem management and restoration. Where certainty is stronger, governments and other actors may choose to make more targeted adjustments in specific investments, directly based on the climate information (Mitchell and van Aalst 2011).

Source: Heltberg, Siegel, and Jorgensen (2009).

## **2.2 Climate Change and SP Functions and Instruments**

The SP&L Strategy distinguishes prevention, protection, and promotion as the three core functions of SP; climate change considerations are relevant to all three (see

Table 1). Moreover, many SP instruments can contribute to climate change adaptation, including safety nets, livelihoods promotion, social funds that promote community-based adaptation, micro-finance and micro-insurance, skills building, assisted migration, and labor market interventions that foster livelihood diversification. Social Protection can also support mitigation (policies to reduce greenhouse gas emissions ) by supporting reforms of wasteful energy subsidies via more targeted compensatory measures as well as through interventions that help either reduce pressure on forests in developing countries (by providing alternative income sources) or enhance them through afforestation/reforestation programs (e.g., public works).

**Table 1: Parallels in Terminology Used to Define Core Social Protection Functions**

Social Risk Management Framework Function	New WB SP&L Strategy	Climate Responsive Social Protection
Risk Mitigation	Prevention	Ex ante security against climate shocks, for example via insurance
Risk Coping	Protection	Ex post protection against shocks and disasters due to climate change and climate volatility
Risk Reduction	Promotion	Long term adaptation via livelihood promotion and livelihood diversification

Source: Authors based on World Bank (2010c).

*Prevention* measures such as social insurance, weather-based insurance, social transfers, asset diversification, and other instruments may help reduce vulnerability and decrease the impact of a probable risk by increasing the availability of coping strategies in the face of disasters. Typical SP preventive mechanisms can be enhanced by leveraging knowledge and practices from the disaster risk management, climate change adaptation, and agricultural sectors for risk reduction (e.g., environmental management and improved land use).

*Protection* measures aimed at providing relief and coping mechanisms are becoming instrumental as medium term responses in the face of natural disasters and climate shocks. Social protection's core function of *protection* will continue to be relevant to address the growing risk of climate impacts using cash transfers, social pensions, public works programs, and other instruments.

*Promotion* measures have the potential to contribute to climate change adaptation by encouraging risk diversification, enhancing incomes and assets, and building skills, and thus helping address underlying vulnerabilities and building capacity for response. Cash and asset transfers, microfinance, public works, training and skills programs, asset diversification, and starter packs (drought/flood resistant) not only can help build resilience to climate change but also promote access to new opportunities arising from a changing environment.

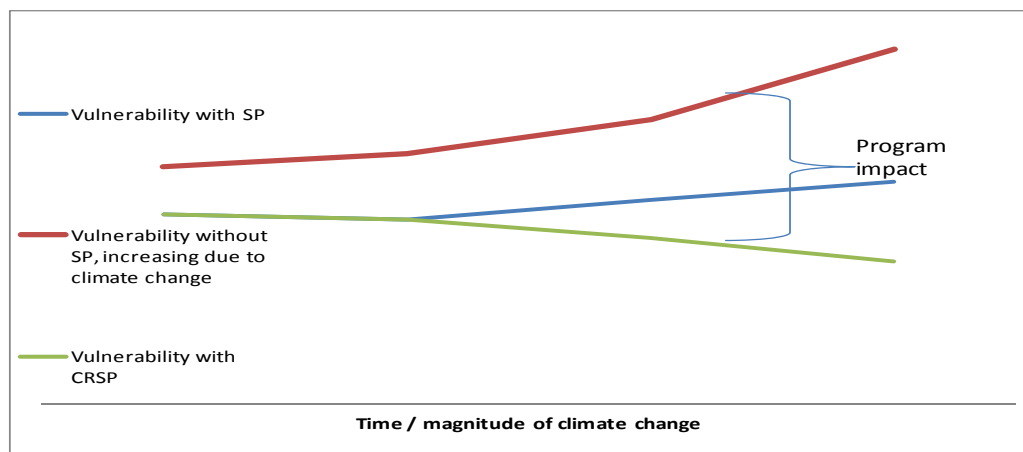
### 2.3 Climate Change and Social Protection Systems

The effects of climate change are multi-dimensional and affect different regions, institutions, and actors in different ways. Effective coordination of activities and resources across international, central, and local levels is essential. SP systems need to recognize the risks arising from natural disasters and climate change and to address these dimensions as part of a comprehensive effort to reduce vulnerability.

The new Strategy proposes a move toward inclusive, synchronized, measurable, affordable, responsive, transparent (SMART), and accountable SP&L systems. Climate change has implications for how to understand SMART SP&L systems. *Synchronized* systems in the age of climate change requires coordination with disaster risk management authorities, early warning systems, and agencies responsible for coordinating climate change efforts, some of whom will be new partners for the SP sector. *Measurable* system performance is being rendered harder as changing climate increases the baseline level of vulnerability and since the climatic events against which the system is building resilience may or may not occur within the lifetime of any given project (see Figure 2). What constitutes an *affordable* system has to be reevaluated in light of potentially substantial new climate-related financing that might serve to consolidate ad hoc, ex post humanitarian assistance into national SP systems. Also, more fundamentally, the costs of climate-responsive social protection should be assessed against the costs, likely very high, of *not* addressing vulnerability to the impacts of climate change (Shalizi and Lecocq 2009). The urgency of *responsive* systems is growing as disasters increase in frequency, and likely also in severity, implying a mounting need for systems with built-in mechanisms to respond to shock and disaster. Finally, the need for *transparency and accountability*, with clear rules, roles, and controls is being reaffirmed and magnified as the SP sector integrates with wider humanitarian response and climate change mechanisms, having to coordinate with new partners, play new roles, and move new financing.

Climate-responsive social protection faces many challenges, often stemming from the complexity of integrating climate change adaptation and disaster risk reduction considerations more fully into SP programs (World Bank 2011b). Traditionally, social protection, climate change adaptation, and disaster risk reduction have operated as separate sectors, reporting to different and weakly linked line ministries and employing staff trained in different technical disciplines. Each sector runs its own programs drawing on distinct lines of funding and focuses on different sets of risks and target groups (World Bank 2011b). These factors can make integration across domains difficult. It is imperative to seek greater synergies across and innovate within these domains to address vulnerability stemming from the risks associated with climate change.

**Figure 2: Climate Change Shifts and Baseline Level of Vulnerability**



Source: Authors (2012).

Note: This stylized representation attempts to illustrate what may happen to levels of vulnerability in the face of climate change.

### III. A FRAMEWORK FOR CLIMATE-RESPONSIVE SOCIAL PROTECTION

The purpose of climate-responsive social protection is to help households and countries respond and adapt to climate risks. The framework presented in Figure 3 intends to help social protection and labor practitioners consider the opportunities, entry points, and specific steps that can help evolve SP&L programs and systems toward greater climate responsiveness.

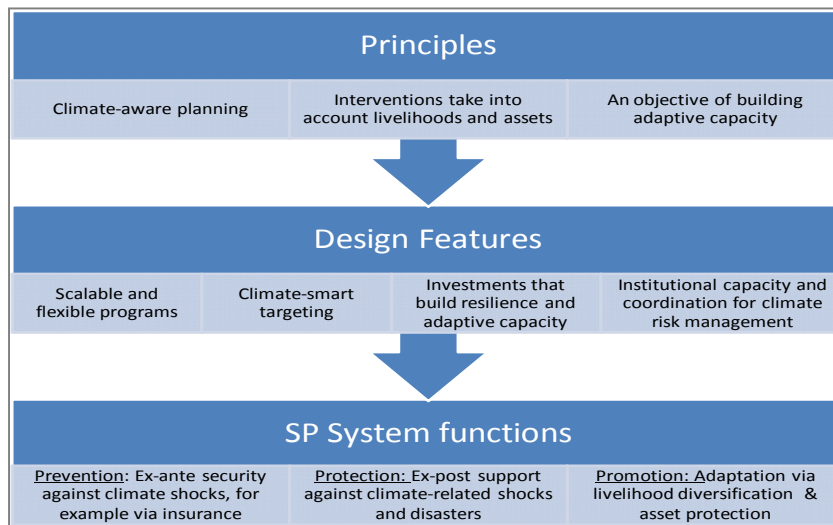


### 3.1 Principles of Climate-responsive Social Protection

Three principles form the starting point for climate-responsive social protection (CRSP), namely: (i) climate-aware planning; (ii) interventions centered on livelihoods; and (iii) a focus on building adaptive capacity.

**Climate-aware Planning.** The effects of climate change will vary in extent across countries and sectors. Although climate projections provide ranges of expected temperature and precipitation, it is still difficult to anticipate specific effects with any certainty, particularly at the local level. In addition, new climate trends that result in deviation from the historical range in weather patterns are a major challenge to communities and development practitioners learning how to plan appropriately to adapt to climate risk. For SP policymakers and practitioners this translates into the need to acknowledge and hedge against uncertainty, plan for higher frequency and severity of disasters, and build in feedback loops with early warning systems while coordinating with agencies responsible for meteorology and climate change. Planners may also want to consider both the direct (mainly disasters) and the indirect impacts of climate change such as food price volatility, food insecurity, migration, and potential conflict over land and natural resources.

**Figure 3: Climate-responsive Social Protection Framework**



Source: Authors (2012).

More frequent and severe climate events can quickly exhaust the reserve resources and assets held by actors at all levels if ways are not found to manage disaster risk. Covariate risks are likely to increase and overlap since the physical effects of climate change tend to be geographically concentrated, as are many livelihoods. As a consequence, countries that in the past deemed informal safety nets to be adequate may find that an increasing frequency of covariate shocks results in growing pressure for more formal and systematic forms of protection. Ethiopia is a country that has taken steps to integrate disaster planning into social protection. A key principle of Ethiopia's Productive Safety Net Project (PSNP) is to deliver timely and predictable transfers to households. To increase the program's capacity to respond early to rapid onset climate events, droughts in particular, an emergency risk-financing facility was added in 2007. Donors committed to replacing their previous ad hoc emergency financing with predictable, ex ante financing in response to regular seasonal food insecurity. However, the need for long term, risk-reducing investments in adaptive capacity should not be neglected.

**Interventions that take account of livelihoods and assets.** Understanding how households' assets and livelihood strategies will be affected by climate change is a crucial step in designing climate-responsive social protection. A user-oriented perspective that takes into account the economic decisions made by households and communities will help predict the likelihood of them adopting different adaptation measures, how successful these are, and how SP can contribute to livelihood resilience and local adaptive capacity. Moreover, it is important to avoid artificially maintaining livelihood strategies that are becoming unsustainable as the physical environment on which they are based changes dramatically (see Box 3). Further, taking a livelihoods perspective can help planners understand the coping strategies of households during shocks and thus design interventions that minimize the extent to which households resort to negative coping strategies such as distressed asset sale. Broadening and strengthening asset and livelihood portfolios of households and communities in advance of shocks also contributes to increase resilience. Finally, vulnerability does not fall from the sky: it is produced by local inequities that mediate how

shocks translate to outcomes for different groups of people (Ribot 2010). Issues of power and voice therefore need to be tackled by any pro-poor climate action.

### **Box 3: Stay or Leave? The Dilemma of Livelihoods No Longer Viable**

When policymakers decide to maintain households in regions where the old livelihoods are no longer viable – for example by providing them with a safety net, subsidies, or other support – they need to consider whether they are promoting long term dependence in permanently degraded environments. In places where, for instance, desertification takes over farmland or permafrost changes the ecology of rangelands, livelihoods may be changed irreversibly, possibly beyond the scope of any adaptation strategy. Coastal regions will be hard hit by extreme weather events. Rising sea levels, seawater intrusion, and warming ocean temperatures may force fish to move to deeper waters to areas unreachable by traditional fishing practices. The greatest risks will be borne by those least able to cope and may be magnified by maladaptive policies, like policies aiming to prevent migration (Black et al. 2011). Support for relocation may be better than support for traditional livelihoods, and migration should be seen as a means of building resilience, contrary to its typical past perception in the climate change community. However, the reality of migration is that people often move into places of high environmental vulnerability such as low lying coastal cities (Government Office for Science 2011). Planners need to take into account an increased propensity of people to migrate and plan for increasing urban populations that are vulnerable and socially excluded. Measures such as flood control, water management, early warning systems, and conflict resolution will be required, as will interventions that build the skills and mechanisms for moving into new occupations and new places.

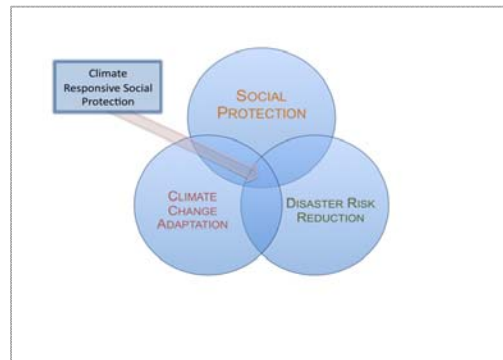
Source: Government Office for Science (2011).

**Interventions that aim to build adaptive capacity at all levels.** Climate change has the effect of disproportionately increasing covariate risk, leading to heightened vulnerability of entire countries and communities. A household-level focus will be insufficient to address that vulnerability. Efforts by the SP sector may consider incorporating an objective to build adaptive capacity at the national or local level and be based on both an understanding of: (i) how climate change is likely to affect a country or a geographic area; (ii) which physical, natural, or institutional assets need to be strengthened; and (iii) how consultations and other processes can help empower the most vulnerable. Local institutions mediate how

households are affected by and respond to climate change and variability, and often channel external adaptation interventions. Designing programs that support local empowerment and build adaptive capacity can help protect the voice of the most vulnerable and ensure their inclusion in programs.

#### **Box 4: Disciplines Underpinning Climate-responsive Social Protection**

The CRSP framework draws from three distinct disciplines: social protection, disaster risk reduction, and climate change adaptation. Although these disciplines have evolved separately and have developed different concepts, languages and practices, they share common concerns and similar objectives: they all aim to reduce risks and lessen the impacts of shocks faced by households and communities. In the long term, they aim to help vulnerable populations not only cope with but also plan for and build resilience to shocks.



A growing agenda is emerging around stronger integration of these three disciplines. The Stern Review (2006) called for the integration of climate change considerations into the development practice and singled out SP as a key component of climate change adaptation. The UNDP Human Development Report (UNDP 2007/08) and the World Bank (Heltberg 2007; Heltberg, Siegel, and Jorgensen 2009; Mearns and Norton 2010) have reviewed the linkages between these three disciplines and offered examples and options for coordination. Others are also examining the links, including UNICEF, WFP, DFID, and IDS (see for example Davies et al. 2009). In March 2011, a workshop held in Addis Ababa on “Making Social Protection Work for Pro-Poor Disaster Risk Reduction and Climate Change Adaptation” brought together practitioners from the three fields to discuss ways of integrating their work. The workshop identified key analytical underpinnings for a combined approach, challenges to integration, and next steps.

Source: Adapted from Davies et al. (2009) and World Bank (2011b).

### **3.2 Design Features of Climate-responsive Social Protection Interventions**

Four design features that embody the principles outlined above can help practitioners devise social protection programs that address the negative impacts of climate change. These features are: (i) scalable and flexible programs; (ii) climate-smart targeting; (iii)

investments that build resilience and adaptive capacity; and (iv) promotion of institutional capacity for climate risk management.

**Scalable and flexible programs** are arguably one of the single most important evolution elements to help SP programs respond better to climate-related disasters, in the same way that it is important for responses to economic shocks. Scalability means that programs can rapidly expand coverage during crises and scale back afterwards; it also means the ability to scale up levels of support to existing beneficiaries to cope with the impact of shocks. Achieving scalability requires that targeting, registry, and payment systems can identify, enroll, and make transfers to additional eligible beneficiaries and that funding arrangements can mobilize adequate resources on short notice. Planners can consider adopting early warning triggers, such as those based on weather indices as well as approaches for responding to needs that emerge gradually over time. Achieving scalability and flexibility requires overcoming a range of institutional challenges to make agencies responsible for delivering a more agile SP.

Securing flexible funding to respond adequately to rapid onset shocks has been a major challenge in the past. In order to reduce the fiscal burden of disasters, governments should be encouraged to manage risk through a suite of disaster risk management investments and instruments such as effective early warning systems, infrastructural investments, and a range of disaster risk financing instruments. Specifically managing contingent fiscal risks can be addressed by examining the “layers of risk” ranging from the frequent but less damaging events to the rare but catastrophic disasters and establishing the most efficient ways to manage this risk using a wide spectrum of instruments. Funding for low impact, frequent disasters are typically managed by “on-balance sheet” funding mechanisms like national disaster relief/calamity funds. Medium impact disasters (a 1-in-10 or 1-in-25 year event) can be funded by having contingent lines of credit in place like the World Bank and IMF Catastrophe Drawdown Option, reallocating budget lines in the wake of the disaster, or restructuring existing loans to finance disaster reconstruction (Alderman and Haque 2005). More severe (1-100 year and above) disasters are typically funded through more expensive

mechanisms like traditional or parametric insurance or catastrophe bonds that can transfer the risk out of the country. Whatever the best option, ex ante planning and the establishment of strong systems that can respond quickly will reduce the typical disaster response shortcomings such as insufficient and slow release of funds that result from post-disaster appeals, ineffective use of funds due to lack of preparedness and poor human and institutional capacity, and unclear implementation arrangements that can fall victim to moral hazard.

Development partners can ensure their social protection programs needs are met – even in the wake of a disaster – by ex ante planning that lays the foundation for quick response. Establishing flexible funding instruments that are triggered with pre-agreed indices or indicators, for quick scale-up include contingent credit options, and reallocation of programmed funding through zero allocation contingency budget lines. Contingent credit agreements between governments and either commercial banks or international financial institutions give governments guaranteed access to sufficient funds after a shock, and are triggered only when the agreed trigger point is struck. The funds revolve and are available every three years, or if repayments have been made. Zero allocation contingency budget lines allow for programmed money to be reallocated for post-disaster response or reconstruction, within allowed categories. For example, a school improvement project may allow available funds to be re-allocated to school reconstruction. The World Bank also offers a broader framework agreement that 5% of programmed but unspent funds in a country portfolio may be reallocated for emergency response similar to the zero allocation contingent budget lines.

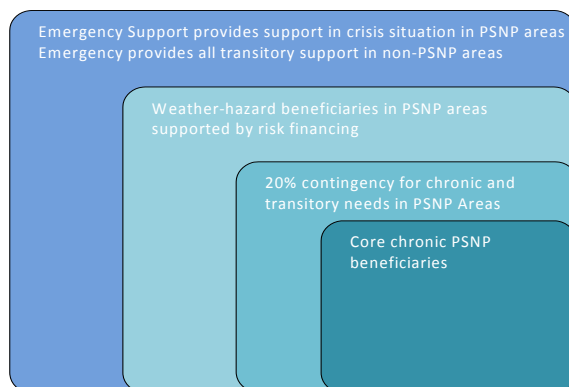
**Climate-smart targeting.** Many social protection programs target poor and vulnerable households using a variety of methods. Climate-responsive targeting uses area- and household-level data on climate exposure to inform targeting and distinguishes the transitory from the chronic poor in places where crises are likely to occur and require rapid scaling up.

### Box 5: Climate-responsive Targeting in Ethiopia

The targeting for all four food-security programs under Ethiopia's Productive Safety Net Program (PSNP) is based on the food security status of regions, districts, and households in a combination of geographic and household targeting. The PSNP's scalability feature allows it to increase coverage in response to extreme weather events. It thus can provide an effective safety net for both chronically and transitorily food-insecure households after disasters through a graduated targeting system:

- *Annual targeting exercises* that allow for the re-categorization of households from transitory to chronic status, making them eligible for full program support if they have become chronically food insecure in the previous year.
- *Contingency budgets* that are held at the *woreda* level and can be used to support transitorily food-insecure populations (and chronically food-insecure households).
- A *risk financing* component that targets large numbers of transitorily food-insecure populations in PSNP *woredas* affected by a significant climate event.
- *Operational links* with emergency system implementation to cover catastrophic emergencies in PSNP areas and all food security needs in non-PSNP areas.

The nested targeting system (see figure below) illustrates the smooth cooperation between the emergency system and the PSNP that aims to ensure that large portions of populations exposed to weather hazards receive appropriate support depending on the level and timing of their need.



Source: Authors (2012).

Given that climate change impacts will tend to affect certain areas more severely than the country overall, geographic targeting may sometimes be a useful way to deliver assistance to those affected most adversely by climate change, often in combination with other targeting methods. Similarly, social protection interventions could target communities or groups of households based on their livelihood strategies, which are often (though by no means exclusively) clustered geographically, for example, pastoralists or fishing

communities. Early warning systems and weather-based data from satellite and rainfall stations can be used to monitor vulnerability correlates and assist in geographic targeting systems as in Ethiopia (**Error! Reference source not found.**).

At the household level, whereas most social protection interventions target the chronic poor, a climate-responsive lens also places an important emphasis on those transitorily vulnerable to climate shocks. Alderman and Haque (2005) have explored the differences between programs in which targeting is based on a household's chronic poverty (or its correlates) and those in which it is based on a household's losses or potential losses as a result of a shock. Proxy means testing uses a set of easily identifiable indicators such as household's location, the quality of its housing, and its asset holdings to develop a score that can be compared with a pre-determined threshold for eligibility. This is considered an effective way to target the chronic poor. However, proxies are static and tend to correlate with long term poverty measures rather than reflecting short term or intermittent risk and vulnerability and are therefore not appropriate for measuring rapid changes in welfare due to sudden shocks (Alderman and Haque 2005). Therefore, proxy means testing might be less relevant for identifying households in need of transitory support (Grosh et al. 2008). One way to remedy this weakness would be to identify correlates of household vulnerability that can be incorporated into a proxy means test to measure transitory need. Other targeting approaches commonly used in disaster response employ categorical targeting, often in conjunction with assessment of actual losses. Insurance is another option, as insurance products offer people self-targeted access to protection through insurance policies that respond to particular needs (see Box 6).

Finally, *community-based targeting* uses information collected by a group of community members or community leaders whose principal functions in the community are not related to the transfer program to identify households in need of support. It may be more effective than means testing in identifying the transitory poor, as well as those community members at risk of becoming poor in the near future. Community-based targeting also has lower data requirements than means testing. However, accurate community-based targeting can be



time-consuming, is sometimes susceptible to local political interference, and can slow down the pace of any crisis response.

Which targeting mechanisms are selected will depend on whether the primary objective of the program is to *promote* livelihoods in non-crisis times or to *protect* them during crises. For example, safety net designers might take uninsured risk into account more explicitly by targeting the transitory poor hit by shocks, thus enabling these vulnerable households to engage in riskier higher return activities. This would require, among other things, a flexible targeting mechanism with criteria different from those for the chronic poor, in addition to flexible financing and implementation arrangements (Alderman and Haque 2005). Regardless of the approach or combination chosen, targeting mechanisms need to be able to respond quickly to unforeseen climate-induced crises within existing operating structures and to be able to scale down again after the crisis abates.

**Investments that build resilience and adaptive capacity.** This design feature can be achieved by (i) strengthening community physical assets and (ii) by supporting livelihoods in a manner that serves a long term adaptive social protection function.

*Strengthening community social and physical infrastructure, and natural assets.* Interventions that enhance communities' physical assets are key to supporting adaptation to climate change. Community-based adaptation is a promising vehicle for channeling adaptation investments to vulnerable communities, and one that can be financed and scaled up via social funds (Heltberg, Gitay, and Prabhu 2011). Labor-intensive public works programs designed with the participation of local communities is another way to enhance adaptive capacity and contribute to broader efforts at building resilience against climate shocks while creating local employment. These programs can yield double dividends by providing paid employment for the poor while building vital infrastructure needed by the community. Examples include: (i) environmental rehabilitation (soil and water conservation through tree planting, bunds, area catchments, and fenced enclosures); (ii) building or reinforcing water access or de-silting irrigation, especially in drought-prone areas; (iii)

climate-proofing physical infrastructure (strengthening embankments, buildings, roads, bridges, or gullies that resist flash flooding); and (iv) building community-based disaster risk reduction assets, including storm shelters. Public works programs are most useful as forms of support during disasters provided that the interventions have been pre-planned and screened in advance for their social, environmental, and engineering feasibility. This makes implementation and scale-up more effective once a disaster strikes, because the infrastructure contributes to longer term development objectives that reduce a community's climate vulnerability over the longer term. This approach requires a strong emphasis on scenario and contingency planning, and a degree of redundant capacity that can quickly be drawn upon if the need to scale up arises.

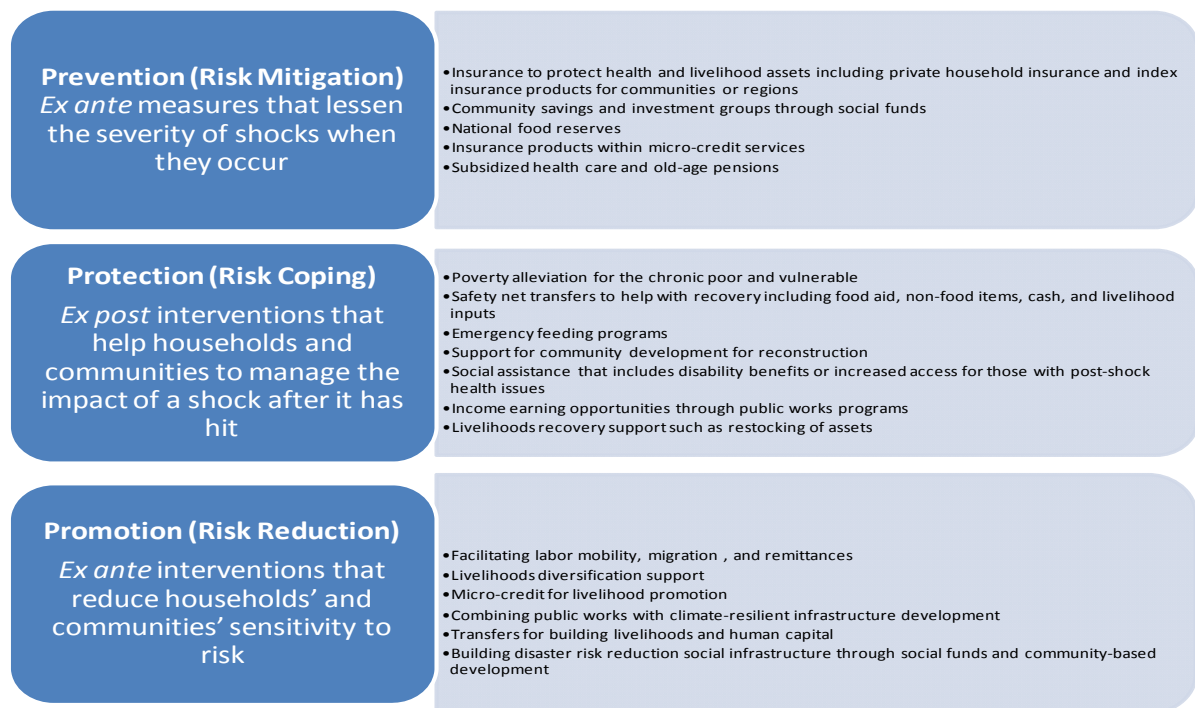
*Supporting viable livelihoods at the household level.* Climate-responsive social protection that explicitly support livelihoods need to be carefully designed to ensure that they serve a long term, adaptive social protection function. There are many instruments available to support sustainable livelihoods, including crop and livestock insurance that allows farmers to take greater risks and experiment with new climate resilient agricultural varieties that would not be possible with traditional crop insurance schemes; asset restocking, such as poultry rearing in flood-prone areas or camel rearing in drought-prone areas to enhance income and increase climate resilience; training and support for off-farm livelihoods diversification into rural enterprises and industry; cash and food transfers that increase food security and enable households to invest in the next generation by facilitating access to education and health services; labor-intensive public works programs that provide households with income support while also building vital physical infrastructure to strengthen area resilience; and assisted migration or resettlement projects with improved remittance schemes (IDS 2007; see also **Figure 4**). Mongolia's experience in building livelihoods resilience via such multi-pronged investments is discussed in Section 4.

*Promoting institutional capacity and coordination to manage climate risks.* Public, civic, and private institutions influence how climate risks affect households and can either facilitate or impede responses to climate risk. Institutions are also often the implementers of

interventions funded by development partners aimed at promoting climate resilience (Agrawal 2010; Ruijs et al. 2011; World Bank 2011a). While strengthening institutions to manage climate risks is an important feature of climate-responsive social protection, SP&L designers must take into account the role played by informal institutions and avoid undermining traditional mechanisms of risk management. Reduced fragmentation of programs and institutions can boost risk management capacity.

An integrated climate-responsive social protection system builds on existing government systems; uses information systems that cover a range of programs and sectors; delivers a wide range of programs in accordance with country needs; and links with early warning and emergency systems. It also aims to foster participatory planning, strengthen the voices of all stakeholders, and enhance social accountability. To this end, it is important to include local institutions and communities in planning, targeting, monitoring and evaluating climate-responsive SP interventions.

**Figure 4: Potential Climate-responsive Social Protection Instruments**



Source: Authors (2012).

### 3.3 Functions and Instruments of Climate-responsive Social Protection

As already mentioned, many SP instruments can help achieve the preventive, protective, and promotional functions appropriate for a changing climate. Particular ex ante and ex post instruments that have proven effective for CRSP in various countries include safety nets or social assistance in the form of cash or food to help households to respond flexibly to climate shocks and natural disasters, social funds to help communities to adapt, and interventions in the areas of skills development, microfinance/ insurance, and assisted migration/resettlement to support productive and sustainable livelihoods. Figure 4 presents examples of the types of interventions suitable for CRSP, while the case studies in Section 4 summarize the instruments used by Ethiopia and Mongolia to help farmers and pastoralists manage risk. Box 6 elaborates on insurance as an instrument for climate adaptation.

#### **Box 6: Insuring Against Adverse Climate**

Insurance products can offer both poor and non-poor households self-targeted risk management through programs that respond to their particular needs. It is possible to extend insurance coverage to poorer households through micro-insurance, combined with outreach and education, subsidized either by the government or by insurance providers. For example, insurance providers can use parametric, index-based insurance instruments to avoid many of the transaction costs associated with providing a large number of very small insurance contracts in the traditional manner. The covariate nature of most climate shocks necessitates the use of national or international reinsurance mechanisms that can effectively pool and spread risk. Experience from a number of countries such as India, Mongolia, and Mexico suggests that this is a feasible approach for responding to transitory shocks related to climate changes but that a number of challenges need to be overcome. For instance, parametric insurance products also need careful design to minimize basis risk, the divergence between actual losses and the index used to calculate payouts.

A carefully designed index-based livestock insurance pilot run by the International Livestock Research Institute in arid parts of Kenya and Ethiopia has overcome many of these technical challenges but struggles with low uptake, selling only a few hundred policies in recent seasons (see <http://livestockinsurance.wordpress.com>); a few seasons with good rains and no payouts can sometimes mean that people do not renew their policies. The willingness to pay for insurance among the poor and near poor depends very much on the type of product offered and on people's trust in the insurance companies. It is therefore important to develop products that closely meet people's insurance needs and to set up effective systems for marketing and for settling claims in a timely fashion while keeping transaction costs low (Banerjee and Duflo 2011).

#### **IV. CASE STUDIES**

Social protection programs in Ethiopia and Mongolia illustrate most of the principles and design features of climate-responsive social protection (CRSP). The two case studies presented were chosen because they are frequently mentioned in the literature and discussions on how to integrate climate and disaster considerations in SP programs; they are both national in scale and government-run. While other programs exist and also could have been mentioned here, many are smaller in scale and not necessarily run by government.

##### **4.1 Ethiopia Food Security Program**

In Ethiopia, poverty and vulnerability are closely correlated with dependence on agricultural livelihoods. Approximately 85 percent of the population works in agriculture, with 90 percent of small scale farmers being highly vulnerable to climate variability (Deressa et al. 2008). The sustainability of livelihoods of agrarian households is affected by such factors as environmental degradation and poor natural resource management, the reduction in average landholdings due to population growth, frequent extreme weather events, and a range of government policies on land tenure, urbanization, and agriculture. These factors have had a devastating effect on the ability of poor rural households to meet their basic food needs and many of Ethiopia's 12 million smallholder farmers are chronically food-insecure (IFAD 2009).

Moreover, extreme weather events occur frequently in Ethiopia. In 1994, 2000, 2002, and 2008, there were significant droughts, which resulted in the need for food assistance for 6 to 13 million people annually (World Bank 2010a). Climate forecasts for Ethiopia predict increases in maximum and minimum temperatures in all regions of the country, along with a decrease in annual rainfall, more frequent heat waves and drought, and increases in flash rainfall. Changes in temperature and rainfall affect agriculture and food security by changing the length and timing of growing seasons and by increasing the variety of crop pests and diseases as well as livestock and human diseases. Current crop types and

cultivation and herding practices may therefore not be viable in the future. The increasing frequency and intensity of storms will lead to accelerated land degradation due to soil and vegetation loss. In this context, the currently predicted threats related to food security may be exacerbated unless the country's economic structure is significantly diversified.

### ***Social Protection Response***

Until 2005, emergency food relief was the government's primary response to food insecurity. However, it was recognized that this emergency approach was an inefficient response to a chronic and predictable problem. The Government of Ethiopia Food Security Program (FSP) was established to increase food security among chronically and transitorily food-insecure populations. The FSP seeks to address food insecurity by strengthening the resilience of rural livelihoods and providing transfers to households that are unable to meet their minimum needs. It uses a combination of minimum needs and livelihood support to weather-dependent rural households to help them manage the risks posed by increasing climate variability. The FSP is a multi-pronged program with components ranging from consumption smoothing to investments in area resilience and support for household resettlement provided through four sub-programs: (i) Productive Safety Net Program (PSNP); (ii) Household Asset Building Program (HABP); (iii) Resettlement Program; and (iv) Complementary Community Investments (CCI) Program.

The *Productive Safety Net Program* (PSNP) was established in 2002 and is one of the largest social protection programs in Sub-Saharan Africa, supporting more than 7.5 million households a year through cash and food transfers. Its objective is to assure food consumption and prevent rural, food-insecure households from depleting their assets while also stimulating markets, rehabilitating and enhancing the natural environment, and increasing access to services. The PSNP provides predictable transfers to food-insecure households; creates community assets; builds community capacity in program delivery; and promotes markets for food staples and certain non-food items.

The PSNP provides transfers to eligible households in rural areas through two components. First, it makes cash payments to its core beneficiaries, chronically food-insecure households, in exchange for their participation in public works. For labor-constrained households (e.g., the elderly, people with disabilities, and pregnant or lactating women, the program provides a direct transfer with no public works participation. Transfers are delivered regularly for six months and are timed to take into account both labor availability and household food needs. Second, a risk financing component supports households in the event of a specific weather shock that threatens their food security and livelihoods by extending income transfers to program beneficiaries and adding transitorily food-insecure households to the program for a defined period of time.

The *Household Asset Building Program* (HABP) complements the PSNP in helping chronically food-insecure households access services and build the skills and assets necessary to establish viable, diversified livelihoods. It offers PSNP households access to credit to invest in on- and off-farm livelihoods, supports agriculture and livestock extension services, and increases the access of beneficiary households to product and labor markets.

The *Complementary Community Investment* (CCI) Program is a capital-intensive infrastructure investment program (in contrast with the labor-intensive PSNP public works) that funds infrastructure investments in areas like irrigation, water source development, roads construction, and rangeland management that promote food security in water-stressed *woredas* (districts). The program began to be implemented in PSNP *woredas* in pastoral and agro–pastoral areas in 2010.

The *Resettlement Program* offers a similar combination of community investments and support for households' minimum needs and livelihoods to those who willing to relocate, thus reducing the stress on limited land in the original areas.

All four components of the FSP focus on the same group of beneficiaries – the food-insecure and their communities – and jointly attempt to address the vulnerabilities that lead to food insecurity. The PSNP aims to smooth the consumption of the poorest households, while the

HABP provides these same households with additional support to build productive and resilient livelihoods. Complementing the household support programs, the community infrastructure investments and the PSNP public works both support improvements in the natural environment and the building of area assets that reduce vulnerability and enable growth. Together, this blend of programs constitutes an effective response to the challenges of climate variability and food insecurity in highly vulnerable regions.

The outcomes of the Food Security Program are encouraging. For example, in the PSNP: (i) the real income of PSNP beneficiaries increased while the income of non-beneficiaries was decreasing; (ii) beneficiary households increased their food intake during the lean season; and (iii) PSNP households reinforced their livelihoods by investing in education, health, debt repayment, farming, and trading (Devereux et al 2008). Some of the characteristics of the FSP that better reflect the principles of a climate-responsive social protection approach are described below.

### ***Supporting Resilient Livelihoods through the FSP***

Evidence suggests that the Household Asset Building Program and the Resettlement Program have both had a positive impact on the livelihoods of their beneficiaries. The FSP also furthered asset development by combining the minimum needs safety net (PSNP) with a livelihoods input (HABP), enabling some households to acquire assets and to access new technologies and services to improve their livelihoods.

### ***Flexible Funding***

A key principle of the PSNP is to deliver timely and predictable transfers to households. To facilitate this, donors have committed to replacing their previous ad hoc emergency financing with predictable, ex ante financing in response to regular seasonal food insecurity. The emergency risk financing component of the PSNP was added in 2007 to increase the program's capacity to respond early to rapid onset climate events. The existing emergency response system in Ethiopia had required that an emergency already be underway before additional funding could be secured: the government had to assess the situation, officially



proclaim a disaster, appeal to the development community for funds, and wait for those funds. This meant that it could take up to eight months for resources to be delivered to affected households, by which time the households had often already taken adverse coping measures. The risk financing approach improves on this process by using early warning information as a trigger for beginning the search for pre-disaster funding, thus cutting the disaster response time in half.

### ***Climate-aware Targeting***

The targeting for all four FSP programs is based on the food security status of regions, *woredas* (districts), and households in a combination of geographic and household targeting. Households living in vulnerable *woredas* who engage in low input, smallholder agriculture constitute much of the food-insecure population and are also the most vulnerable to the negative impact of climate change. In the FSP, food-insecure *woredas* are identified based on the number of food aid recipients. Households are targeted in the PSNP by the community-level identification of the poorest households and in the HABP credit program by self-identification. By design, only PSNP households are eligible for the HABP.

The PSNP's scalability feature allows it to increase coverage after extreme weather events occur so that it can provide a wider safety net in response. Various types of households receive differentiated levels of support depending on their degree of food insecurity and the timing of their need (see **Error! Reference source not found.** above).

### ***Strengthening Community and Institutional Capacity to Adapt to Climate Change***

Ethiopia's PSNP plans its public works through the government's Community-based Participatory Watershed Management Planning process. The public works use an ecosystem approach that encourages local constituents to identify and prioritize the investments needed in their communities, such as soil and water conservation. This gives people a sense of ownership of community assets, promotes better use and maintenance of these assets, and increases local institutional capacity.

### ***Flexible Support Mechanisms***

The PSNP supports households in three different ways: cash only food only; or a mixture of cash and food. From the start, the PSNP has encouraged a shift from food to cash transfers because cash is more fungible and can stimulate local food and non-food markets in vulnerable regions. The PSNP also is able to respond when market conditions (e.g., high food prices or an insufficient supply of food) make cash a less attractive transfer option, for instance by increasing the cash wage rate for public works or providing food aid in seasons with very high food prices. With this flexibility, the program manages the risks of seasonal price differences, market fluctuations, and the availability of program funds.

### ***Lessons Learned from the Ethiopia Case***

A number of lessons can be learned from the Productive Safety Net Program regarding programming for climate-responsive social protection.

- Geographic targeting can be an effective way to identify areas most vulnerable to climate risk and most in need of social protection interventions. As climate change begins to affect the nature and timing of agricultural production and increase the incidence of extreme weather events, geographic targeting will be an increasingly important approach to social protection targeting. Because the effects of climate change at the local level are highly variable, disaggregated data from early warning systems is needed to ensure that specific climate-affected populations are not overlooked.
- Public works programs can build climate-resilient infrastructure and natural resource assets at the area level while also strengthening adaptive planning capacity at the community and local government levels.
- Investing in scalable programming linked to early warning systems can save lives and livelihoods when predictable seasonal shocks hit. The PSNP has demonstrated that a graduated targeting system that expands to encompass different groups as they become vulnerable to shocks is a good way to establish an effective risk management system that can respond to alleviate both chronic and transitory poverty from rapid onset events.

- Building flexibility into program design can make programs more responsive to the needs of beneficiaries in times of crisis.
- Social protection programs can include activities designed to help households to develop and diversify their livelihoods to build up their resilience in the face of climate change. Combining the PSNP with the HABP enabled beneficiaries to smooth their consumption while helping them to diversify their livelihoods.

#### **4.2 Mongolia Sustainable Livelihoods Program**

Mongolia's economy and livelihoods are largely dependent on livestock production. Agriculture constitutes around 20 percent of the country's GDP, and 80 percent of agriculture is based on livestock. Nearly half the population of Mongolia is engaged in livestock production, and the livestock population was estimated to be nearly 44 million heads in 2008. Poverty fell from 61 percent of the population in 2003 to 35 percent in 2008; the poorest are likely to be rural, livestock-dependent households, with many children, and with educational attainment of high school level or below (World Bank 2006).

Harsh weather conditions, particularly droughts and dzuds (severe winter storms) are a significant cause of uncertainty and vulnerability for herding households. Either one of these severe weather events can substantially weaken a herd and cause high mortality rates, but the combination of both (as occurred each year between 1999 and 2002) often has catastrophic effects on the livestock population, and thereby on poverty (World Bank 2007b). The latest dzud occurred in the winter of 2009-10 and again, the country was relatively unprepared.

Climate change predictions for Mongolia indicate general warming (including more heat waves and fewer frost days), increased precipitation, and a decrease in the maximum number of days between rainfall periods. The intensity and frequency of natural disasters already have begun increasing, and this trend is expected to continue. Moreover, the implications of climate trends and predictions for the livestock sector in Mongolia in particular are largely negative. As air temperatures increase, permafrost will melt,

negatively affecting the ecosystem as a whole including grass and pasture lands, arable farmland, and steppe deserts. These changes will, in turn, affect traditional animal husbandry, farming, and grazing practices (MoENT 2009).

### ***Overview of the Program***

The Sustainable Livelihoods Project (SLP) is designed to help vulnerable herding households build more resilient communities in order to better manage risks to their livelihoods; although the program is not traditionally considered part of the SP system, it overlaps with SP functions. The Index-based Livestock Insurance Project (IBLIP) grew out of the SLP and is currently funded as a separate program, though it contributes to the overall risk management objective of the SLP. The suite of interventions provided between the SLP components and the IBLIP offers both ex ante and ex post risk management mechanisms to help households and communities plan for and respond to climate risks. The Sustainable Livelihoods Program supports pastoral livelihoods through a range of components designed to reduce vulnerability (World Bank 2007a):

The *Pastoral Risk Management* component promotes effective community-driven risk management approaches that can be scaled up for wider use. Activities include: establishment of herder groups; installation of weather stations for risk forecasting and response planning; pastoral land and social mapping to establish seasonal rotation and pasture use; loans for herder groups; and the establishment of fodder reserves. The primary target group for these activities is herders.

The *Community Initiatives* component uses a community-driven development approach to empower citizens to identify and implement small public works projects. Activities and projects include: establishing community councils for implementing small scale infrastructure projects; increasing access and demand for health and education services; and improving the impact and outcomes of those services. Information dissemination, advocacy, and community mobilization are key features of this component.

*Microfinance development* provides sustainable financial services for rural citizens by stimulating competition among rural financing facilities, expanding the number of lending products, and increasing the number of financial service locations in rural areas. Funds are lent to financial institutions and capacity is built through training and information dissemination for these institutions.

The *Capacity-Building and Project Management* component provides funding and capacity-building assistance to ensure the effective delivery of services through the SLP program office.

The *Index-based Livestock Insurance Program* (IBLIP) is an insurance program that provides indemnities based on aggregate, regional livestock losses rather than real losses sustained at the household level. The costs and risks of the IBLIP are shared among herders, the private insurance market, and the government, creating a combination of private insurance and social safety net that spreads risk across a number of actors. These programs help herders build productive livelihoods and reduce risk. Some of the characteristics that reflect the CRSP principles are described below.

***Strengthening Community and Institutional Capacity to Adapt to Climate Change***

Both the SLP and the IBLIP focus on institution-building for effective risk management, both at the community level and in the private sector. The Community Initiatives (CI) component actively engages communities through councils at the *soum* level (the local government unit below the provincial level charged with the oversight and management of community development funds) through:

- Community participation in and management of investment projects, including identifying need, implementing projects (including procurement), and evaluating their impact.
- Community empowerment and capacity-building through information dissemination and outreach, training, and capacity-building for local government officials as well as community mobilization.

- Awarding of grants to agencies (e.g., government bodies, CSOs, and universities) that develop innovative ways of facilitating the access of the poorest households to social services.

### ***Supporting Climate-resilient Livelihoods***

The core objective of the SLP is to support pastoral livelihoods and households through improved services (including financial services) and institution-building. Its activities aim to strengthen existing livelihoods, build adaptive capacity, and reduce communities' vulnerability to future shocks. The SLP achieved the following outcomes during its first phase (World Bank 2007a):

- Establishment of eight new weather stations to increase the accuracy of weather forecasting.
- Establishment of the Livestock Early Warning System (responsible for 33 percent fewer livestock losses from dzuds in pilot areas than in non-pilot areas).
- Social mapping of pastoral resources to help to establish agreements among herders on seasonal resource use.
- Rehabilitation of wells and establishment of pasture management by herder groups, and an increase in the amount of land used for pasture in seasonal rotation.
- Fostering of more competitive financial service provision resulting in a halving of monthly interest rates from 6 percent to 3 percent, an increase in number of loan products by 300 percent, and a reduction of collateral requirements from 200 percent to 75 percent.
- Loans for income generation and risk mitigation activities that were accessed by 313 formal herder groups for use in herding and non-herding activities, including the purchase of livestock and/or real estate for housing and commercial use.
- Establishment of fodder reserves for emergency use.

This range of activities contributes to reducing poverty and ensures more resilient livelihoods among pastoral communities and households by helping them to engage in

activities that improve livelihoods immediately and reduce the risk posed to them by climate events, giving herders the opportunity to be less risk averse in their investment decisions and to pursue livelihood strategies with higher risks but also higher rewards.

### ***Flexible Financing Arrangements that Support Risk Management***

The IBLIP is strengthening Mongolia's capacity to respond rapidly to catastrophic risk through its Livestock Insurance Indemnity Pool (LIIP). The LIIP was established in order to protect the government budget and the insurance industry from the stresses of highly correlated weather and other shocks that raise livestock mortality rates. The mechanism is a syndicate pooling arrangement into which insurance companies deposit the premiums of herders. The premiums are held in the LIIP until the settlement period, ensuring that indemnity payments are secure and available when needed. The IBLIP has strengthened the government's capacity to respond to a range of rapid and slow onset shocks.

### ***Climate-aware Targeting***

The Community Initiatives Funds uses geographically based poverty targeting to allocate its funding to climate-sensitive populations. It provides funding within pre-determined minimum and maximum amounts to ensure that smaller *soums* receive sufficient funds to carry out a meaningful number of activities and that large *soums* are not given a disproportionate advantage.

Programs encourage self-targeting via loan products that induce poor households to participate. Small herders and micro-entrepreneurs who do not have sufficient animal or other assets find it difficult to meet traditional collateral requirements from lenders. By offering customized loan products and procedures, the program helps poor herders access credit.

### ***Flexible Support Mechanisms***

Flexibility is built into the SLP at both the administrative and project levels. The SLP's Pastoral Risk Management and Community Initiatives funds are administered by local officials in consultation with communities. The program gives significant latitude to

communities to design and implement activities that suit their changing needs. The IBLIP provides mobile herding families with portable benefits, which gives them the freedom to move to different pastures as necessary. This kind of flexibility ensures that households can engage in household-level risk management strategies (e.g., short term migration in the event of harsh weather or localized shocks), while still maintaining their insurance coverage as a buffer against calamitous climate shocks.

### ***Lessons Learned and Implications***

The SLP and the IBLIP showcase important lessons about the design of climate-responsive social protection programs that may be useful in other settings:

- Targeting households that are particularly vulnerable to climate shocks is possible through a combination of categorical targeting and self-targeting.
- Inviting the participation of local communities in the planning, implementation, and monitoring and evaluation of programs can increase their sense of ownership of and demand for services.
- Public–private partnerships can effectively build risk mitigation institutions that are affordable and appropriate and that can build national resilience at the community and national levels.
- Index-insurance schemes can be an effective way to share risk among partners, thus reducing the risk borne by any one actor. They can promote the diversification of livelihoods by households, which itself contributes to risk reduction.

By building capacity in the public and private sector to provide essential risk mitigation programming, the IBLIP has contributed significantly to reducing the vulnerability of pastoral livelihoods. Complementary support from other sectors and policies is essential to the success of these programs.



## **V. SUMMARY AND CONCLUDING REMARKS**

In the years ahead, development efforts aiming at reducing vulnerability will increasingly have to factor in climate change, and social protection is no exception. Climate change will magnify many existing climate- and disaster-related risks; it will also create locally unprecedented types of risk and set back development gains in many parts of the developing world, especially for the poor. The most important risks associated with climate change relate to greater climate variability, in particular greater variability and intensity of rainfall, and long term downward pressure on rural livelihoods dependent on natural resources. It is therefore increasingly important for SP&L strategies and programs to consider climate change and climate risk. At the same time, the promise of significant new financing for adaptation to climate change could bring new sources of revenue for SP programs that build in explicit responses to climate change.

With this background, this paper has made the case for climate-responsive social protection, arguing that taking climate change into account when planning and designing SP will contribute to resilience and adaptation for SP target groups and that many instruments exist with preventive, protective, and promotional functions. To guide thinking and practice in this area, this paper proposed a framework that set out principles, design features, and functions to help SP systems evolve in a climate-responsive direction. The principles comprise: climate-aware planning; livelihood-based approaches that consider the full range of assets and institutions available to households and communities; and aiming for resilient communities by planning for the long term. To this end, there are four supporting design features: (i) scalable and flexible programs that can increase coverage in response to climate disasters and scale back once disasters are abated; (ii) climate-responsive targeting systems, including geographic targeting, to take into account the socio-physical basis of climate vulnerabilities; (iii) investments in livelihoods that build community and household resilience; and (iv) promotion of better climate risk management (e.g., via inter-sectoral coordination and capacity-building). The three functions of social protection can all

contribute to climate adaptation. Prevention measures such as asset diversification, weather-based insurance, and building response capacity can help avoid adverse coping behaviors in the face of disasters. Protection against disasters and climate shocks via ex post transfers already has grown to become an important business line for SP&L. And promotion efforts that enhance assets, skills, and incomes contribute to long term adaptation by facilitating transition and diversification away from exposed livelihoods.

The examples from Ethiopia and Mongolia illustrate that progress toward climate-responsive social protection is feasible and desirable, even in low income countries. Some characteristics of these cases include attention to climate risks in planning, design, execution, and monitoring of programs; attention to rural livelihoods; and extensive coordination with actors outside SP like disaster and meteorological agencies. Other important features of the two cases are scalable and flexible programs that deploy an array of support instruments aimed at prevention using implicit and explicit insurance mechanisms against climate events, protection against shocks, and promotion of livelihood resilience.

Programs in other countries should find it possible to emulate some of the steps taken by Ethiopia and Mongolia. For example, safety net programs and social funds in many countries play a growing role in post-disaster response and in building livelihood resilience. Going forward, it will be important for the sector to pay close attention to the impact of climate change on livelihoods and to institutional capacity for disaster response and adaptation planning.

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## Abstract

In the years ahead, development efforts aiming at reducing vulnerability will increasingly have to factor in climate change, and social protection is no exception. This paper sets out the case for climate-responsive social protection and proposes a framework with principles, design features, and functions that would help SP systems evolve in a climate-responsive direction. The principles comprise climate-aware planning; livelihood-based approaches that consider the full range of assets and institutions available to households and communities; and aiming for resilient communities by planning for the long term. Four design features that can help achieve this are: scalable and flexible programs that can increase coverage in response to climate disasters; climate-responsive targeting systems; investments in livelihoods that build community and household resilience; and promotion of better climate risk management.

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