CHAPTER 6

Social Protection
Designing Adaptive Systems to Build Resilience to Climate Change

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KEY MESSAGES

- Social protection programs are a central component of national strategies in low- and middle-income countries (LMICs) to increase incomes for poor households and protect them from livelihood shocks.
- Social protection is also vital to effective climate change responses; it supports adaption to more frequent extreme weather events and can support mitigation.
- These measures are especially important in LMICs, where most program beneficiaries are poor rural households engaged in agriculture and where climate change may drive major economic disruptions.
- Adaptive social protection (ASP) is an integrated approach that addresses the challenges of climate change by combining social assistance programs with humanitarian assistance and disaster risk reduction strategies.

The following steps can strengthen the role of social protection systems in climate adaptation:

- Expand coverage of existing social assistance to immediately improve resilience of the most vulnerable, reduce hardship, and promote economic inclusion.
- Reform social protection systems by strengthening coordination between conventional social assistance, humanitarian response, and disaster risk reduction.
- Undertake risk and challenge assessments, including of contextual factors and climate forecasting, to inform social protection adaptation.
- Reform program modalities to support household coping strategies, such as using digital transfers that are accessible during local seasonal migration.
- Make social protection "climate smart," such as through innovative insurance and productive inclusion initiatives.

Social protection programs are a central component of national strategies in low- and middle-income countries (LMICs) to increase incomes for poor households and protect them from shocks to their livelihoods. Social protection programs currently reach more than 2 billion people worldwide and are found in every country in sub-Saharan Africa.[1] Social protection systems comprise a wide variety of programs that include targeted cash and food transfers, food vouchers, school meals, public works, old age pensions, and public sector insurance, as well as the policy, administrative, and funding mechanisms to deliver these programs. Numerous studies that draw extensively on rigorous impact evaluations have documented substantial short-term impacts of social protection programs, especially cash and in-kind social assistance, on food security and asset formation,[2] as well as on education, health, and dietary diversity.[3] However, evidence on the impact of social protection systems designed to sustainably reduce poverty by responding to large-scale shocks is more limited. For example, many national social protection systems in the poorest and most vulnerable countries of sub-Saharan Africa and South Asia dating to the 2000s started with targeted standing safety net programs and then later integrated measures to provide humanitarian assistance, scale up temporary transfers to better respond to shocks, and promote household and community *resilience* — the ability to avoid or escape from chronic poverty in the face of myriad stressors and shocks.[4] The potential for social protection to help address the challenges of climate change has been recognized for more than a decade,[5] but the expansion of social protection programs designed to address climate change is relatively recent.[6]

This chapter outlines the policy justification for including social protection in climate change responses in LMICs. We then briefly introduce potential approaches for designing social protection systems to address some of the most serious risks and consequences of climate change. Finally, we propose five steps that governments and their partners can take now to strengthen the role of social protection in climate change adaptation.

WHY IS SOCIAL PROTECTION NEEDED FOR CLIMATE CHANGE RESPONSES?

Social protection measures have been recognized as a vital component of effective climate change responses, as they provide protection from the more frequent extreme weather events caused by climate change (and other shocks such as COVID-19). Contemporary social protection approaches can also play a proactive role in climate change mitigation when they are purposefully combined and integrated with wider climate-related policies.

Adaptive social protection (ASP) is an integrated model that best encapsulates the current approach to addressing the challenges of climate change through social protection.[7] ASP can be used to design social protection systems that build the resilience of poor and vulnerable households to a range of covariate shocks, including natural disasters and slow-onset hazards that are accelerating and intensifying due to climate change, as well as forced displacement and pandemics like COVID-19. This approach integrates (1) social assistance programs like cash transfers, which raise the incomes of poor households and help them respond to shocks, with (2) humanitarian assistance, which provides targeted temporary aid to households that experience a large covariate shock, and (3) disaster risk reduction strategies, which make investments to reduce the effect of future shocks.

There is a strong policy justification for social protection to feature prominently in responses to climate change in LMICs. Most social protection programs target poor households in rural areas of LMICs, where many livelihoods are directly or indirectly linked to agriculture. Major weather events, including droughts and floods, are among the most prevalent and destructive shocks to these economies. In many places, climate change makes such events more frequent and severe. A substantial body of rigorous research documents the impact of social protection programs, showing that they increase household food security and assets,[8] reduce poverty,[9] increase savings,[10] increase education,[11] and promote resilience[12] to economic shocks, including severe weather events.[13]

In addition to this rationale, the projected impacts of climate change underscore the importance of social protection in national response strategies. Climate change has the potential to drive sweeping economic changes, including declining returns to labor in agriculture, a shift toward rural non-farm employment, and rural out-migration to urban centers or other countries (Box 1). Recent evidence provides examples of effective "cash plus" approaches, where, for example, cash transfers combined with agricultural advisory services increased crop production and livestock ownership.[14] Studies that test the impact of cash transfers and job training show some positive effects on off-farm employment under the right conditions. These studies suggest potential for programs providing social assistance and complementary trainings, investment, or services to strengthen impacts on crop diversification, investment in soil and water management, or off-farm employment generation that could help address immediate risks to livelihoods from climate change.

As targeted interventions reaching large populations of poor households, social protection programs will make climate change responses more inclusive. ASP programs can serve as a platform for other components of the climate change response, such as improving access to service delivery in agriculture and health and ensuring that poor and socially marginalized groups are included in climate change initiatives in these sectors.[15] The potential of these programs to include women is especially important, as women are disproportionately affected by climate change.[16] In many societies, women have limited control over household resources, hold less savings and credit, have access to smaller or more marginal lands, and face restrictive norms that limit their ability to rely on others in times of need. As a result, women are more vulnerable to the increasing shocks and stresses brought on by climate change, and they can face increased marginalization and inequality. Transfers from social assistance programs are often targeted to women, which help them build savings and assets, and can strengthen their autonomy over livelihood choices. This could bolster their resilience to climate change–related shocks. However, many programs are not otherwise designed to address the challenges faced by women or their climate risks.

By reforming program modalities to improve resilience, ASP programs have the potential to make climate change response strategies more socially

BOX 1 A ROLE FOR URBAN SOCIAL PROTECTION IN THE CLIMATE CHANGE RESPONSE

Adaptive social protection (ASP) can play a central role in the climate change response in urban areas, but an effective urban approach will differ from the better-known modalities used in rural areas. One reason is that poor households face unique challenges in an urban setting, including the need for employment outside the farm or home, deplorable housing conditions, and high costs for food and basic necessities. The urban context also benefits the poor in some ways, such as affording greater mobility and increased opportunities for employment and human capital investment.

Climate change will contribute to worsening conditions for the urban poor in several ways. First, the number of urban poor is likely to grow, perhaps substantially, as accelerating weather shocks reduce the returns to agriculture, driving migration to cities from rural areas. Also, climate change is likely to increase episodes of extreme heat in urban areas, to which the urban poor are highly vulnerable: they often work outside with little ability to avoid work on hot days, and their housing can be dangerously hot.[a] These heat shocks increase the risk of health problems, but healthcare is often unaffordable for urban poor households.

Urban ASP programs can help address these challenges by conducting vulnerability assessments, improving housing conditions for the poor, improving access to public transit, and providing cash transfers to allow poor households to make decisions that overcome their specific constraints.[b] The centrality of the employment problem explains why urban social protection programs often include job skills training or employment matching and support. However, many government-supported skills training programs fail in LMICs, so innovative approaches are needed. In addition, effective urban social protection programs sometimes include mobile phone–based transfers, vouchers, or smart cards for free public transportation and subsidized childcare to assist women in accessing more employment opportunities.

and gender inclusive. To achieve this, policymakers must recognize that, despite their poverty, beneficiaries of social assistance programs have agency and often work in sectors like agriculture that are most vulnerable to climate risks. Evidence shows that these households will respond to incentives and invest in strategies to improve their well-being when resources and opportunities are available. Thus, the challenge is to identify effective designs for social protection programs that strengthen climate resilience. India's Mahatma Gandhi National Rural Employment Guarantee Scheme, for instance, has taken steps to support climate change adaptation outcomes through its public works.[17] Furthermore, it has the potential to be socially transformative through its inclusion of historically excluded groups such as rural laborers, Scheduled Castes, and women, though the extent of its inclusiveness varies substantially across states, depending on how committed local governments are to its implementation.

POTENTIAL APPROACHES FOR ADAPTIVE SOCIAL PROTECTION TO ADDRESS CLIMATE CHANGE

Recent experience suggests several approaches for ASP programs to address specific aspects of the challenges posed by climate change:[18]

IMPROVING CLIMATE CHANGE ADAPTATION AND MITIGATION. Cash transfers may facilitate the adoption of more climate-resilient crops or related farming practices. A recent study in Malawi used a randomized controlled trial design to test the effect of cash and input transfers, with and without a program of intensive agricultural extension. Both cash and input transfers increased the value of production, and production gains were largest for the group receiving transfers and extension services, though these effects were not sustained after one year.[19] Although this model tested agricultural intensification, it also suggests a promising approach to testing strategies that use cash transfers to promote climate mitigation strategies. In another example, Ethiopia's Productive

Safety Net Program (PSNP) provides transfers to more than 8 million people, primarily through a system of labor-intensive public works (often including women and youth) to rehabilitate land and natural resources on community-held property. A recent study showed that the PSNP increased tree cover by 3.8 percent from 2005 to 2019, plausibly contributing to reduced global warming.[20]

APPLYING INNOVATIVE APPROACHES FOR RISK MANAGEMENT. Insurance-based solutions are a natural response to the challenge of climate risk management, but the private sector has been largely unable to develop crop insurance or related instruments (such as risk-contingent credit) to share risk with rural households. Digital innovations are helping to reduce those barriers, but climate change is raising new challenges by shifting the distribution of outcomes in unpredictable ways. ASP strategies offer possible solutions through planned temporary assistance that is designed like insurance, but with premiums paid by the public sector. One example is state-contingent cash transfers that are pre-committed to be paid to targeted households and delivered in response to climate triggers.[21] In Kenya and Ethiopia, index-based livestock insurance (IBLI) schemes have enabled pastoralists to manage climate risks.[22] This allows households to undertake riskier, but more profitable, livelihood activities, knowing that assistance will arrive in the event of a significant weather shock.

INCENTIVIZING EMPLOYMENT TRANSITIONS AND SUPPORTING GEOGRAPHIC RELOCATION. Social assistance programs can also support economic transitions caused by climate change, such as changes in employment. These changes often represent a moment of economic vulnerability, particularly for the extremely poor. In Egypt, the government introduced FORSA, an innovative program of asset transfers or job training and employment services combined with temporary maintenance transfers, to support beneficiaries of the country's Takaful safety net program as they transition off social assistance. Similar approaches could be applied to support job transitions from sectors declining due to climate change. Evidence of the effect of job training programs in LMICs is mixed, but programs can be successful if they provide skills that are in demand in the labor market. Migration from rural to urban areas is expected to accelerate with climate change, but extremely poor households often lack the resources or financing to undertake the cost of migration or the risk that urban employment will not materialize. Research from Bangladesh showed that a modest transfer to support seasonal migration had very large returns for households facing extreme seasonal food insecurity.[23]

These approaches are promising examples of social protection strategies to address the challenges and constraints imposed by climate change, but evidence of their effectiveness is limited. As governments adapt their social protection systems in response to climate change, research will help to identify which approaches have the most potential. Meanwhile, the effectiveness of many social protection designs is supported by substantial rigorous evidence; these point to steps that governments can take now to strengthen their response to climate change.

FIVE STEPS GOVERNMENTS CAN TAKE NOW

The following steps could be taken now to strengthen the climate change response of their social protection systems.

EXPAND COVERAGE OF EXISTING SOCIAL ASSISTANCE TO IMMEDIATELY IMPROVE RESILIENCE. Substantial, rigorous evidence confirms the significant impact and cost-effectiveness of many common social protection modalities, including the popular program modality of targeted monthly unconditional cash transfers. As an immediately available policy option, governments around the world can increase program enrollment among those most vulnerable to the effects of climate change due to increasingly frequent weather shocks or the changing economic trends described above. This recommendation to expand coverage of social protection programs raises a concern about their fiscal sustainability. Government responses to climate change will face trade-offs between increasing access to transfer programs and investing in sector-specific mitigation and adaptation strategies. Social protection programs cost 1.5 percent of GDP on average, a substantial investment.[24] However, where these investments enable poor households to recover from

shocks more quickly or avoid drawing down productive assets, the cost-effectiveness of transfers from well-implemented programs may be substantial.

REFORM SOCIAL PROTECTION SYSTEMS TO BE MORE ADAPTIVE. Strengthening coordination and integration between conventional social assistance, humanitarian response, and disaster risk reduction approaches will reduce risk and improve resilience throughout the social protection system. In a crisis like a severe drought or flood, social protection programs should be able to undertake the following "shock-responsive" adjustments, according to the type of shock and who is affected: *vertical expansion* to increase the size or frequency of payments to existing program beneficiaries if they are most at risk, *horizontal expansion* to provide payments to newly vulnerable households, and *piggybacking* to draw on existing administrative structures to provide new forms of assistance.[25] Many countries applied at least one of these adjustments during the COVID-19 pandemic.[26] Even before the pandemic, Ethiopia's PSNP was a good example of an ASP system with well-documented evidence of success. The PSNP includes a contingency financing facility in which district officials develop detailed plans to respond to shocks. This enables them to conduct a rapid assessment and respond quickly with appropriately scaled and targeted assistance, whether to existing PSNP beneficiaries or other vulnerable households. A recent study found that during a severe drought in 2015, the PSNP helped avoid a significant food security crisis. The program reduced the length of the food insecure period by 57 percent and facilitated the full recovery of household food security within two years.[27]

UNDERTAKE RISK AND CHALLENGE ASSESSMENTS TO INFORM SOCIAL PROTECTION ADAPTATION. Effective approaches to reducing the risk from climate hazards are likely to depend on context, including vital economic sectors, past exposure to shocks, and dimensions of social and gender inequality. Assessments should also include careful climate change forecasting to anticipate the scope and timing of worsening climate risks. Government officials can then evaluate which risks can be addressed through existing social protection mechanisms and which require new approaches. Governments should guard against the tendency to link program designs too closely to specific climate hazards. Instead, they should design climate-smart social protection systems that consider multiple drivers of vulnerability and strengthen household and community resilience to a variety of shocks.

REFORM PROGRAM MODALITIES TO SUPPORT HOUSEHOLD COPING STRATEGIES. For example, a transition from manual collection of food aid or cash to digital vouchers or cash transfers using "mobile money" platforms would allow recipients to receive payments promptly, anywhere in the country.[28] This would overcome the problem in which geographically-based safety net transfers to rural households prevent them from migrating to cities for more profitable employment. This problem could also be addressed by strengthening urban safety nets, which are likely to expand as the effects of climate change worsen.

MAKE SOCIAL PROTECTION "CLIMATE SMART." Enhance the absorptive, adaptive, and transformative capacities of people facing climate change by scaling up weather-indexed insurance schemes to reach both crop farmers and livestock producers; environmentally friendly public works projects such as community-based watershed management; and productive inclusion initiatives such as the Sahel Adaptive Social Protection Program.[29]

Many governments are working to adapt the design of social protection programs to improve their effects on the resilience of vulnerable households to economic conditions. Climate change increases the urgency of these adaptations. Use of ASP approaches is likely to make national climate change responses more effective and inclusive.