WORKING PAPER

Building Climate Resilience at Scale in the Sahel

Where Climate Funds and Social Protection Make Common Cause

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SAHEL ADAPTIVE SOCIAL PROTECTION PROGRAM

CGAP

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Executive Summary

THE PRIMARY OBJECTIVE OF CLIMATE funds is to finance climate action, including adaptation, mitigation, and addressing loss and damage, with the aim of building resilience among vulnerable populations affected by climate impacts such as shifting weather patterns and rising sea levels. However, these funds face challenges that mean climate finance is often slow to reach those most in need. Challenges include complex approval processes, difficulty aligning with national priorities, and limited capacity of local institutions to absorb and deploy funds effectively.

Social protection systems, which now cover over half of the world's population, can offer a promising solution to these challenges by channeling direct climate funds efficiently to enhance climate resilience and adaptation among vulnerable populations. Social protection systems, including social registries, early warning systems, and delivery systems can engage large vulnerable populations due to their scale, flexibility, targeting and organizational capabilities, rapidly responding to climate shocks, and ensuring the efficient, transparent use of funds.

By integrating climate funds with social protection systems, the funds can leverage these systems to deliver support directly to the most climate-affected individuals and households quickly. This paper demonstrates how existing social protection systems could significantly contribute to the objectives of climate funds by presenting the World Bank's Sahel Adaptive Social Protection Program (SASPP) as an illustrative case study, focusing on three key dimensions: reach, efficiency, and impact. It will also explore some of the questions that will need to be addressed to realize this untapped opportunity.

Introduction

SOCIAL PROTECTION IS A CRITICAL tool for achieving climate goals, including adaptation, mitigation, and addressing loss and damage. It plays a vital role in building resilience among the most vulnerable populations, particularly those affected by intensifying shocks and long-term climate changes such as shifting weather patterns and rising sea levels. For example, in the Sahel,[1] the Sahel Adaptive Social Protection Program (SASPP) helps vulnerable households prepare for and recover from climate shocks by providing financial support, productive inclusion programs, and shock-responsive safety nets. These climate impacts undermine poverty reduction, exacerbate inequality, and threaten social stability. An important development has been that of Adaptive Social Protection (ASP). It is a set of key policy instruments that promote the resilience of the poorest and most vulnerable, helping individuals and households prepare for, cope with, and recover from climate-induced shocks and disasters (Universal Social Protection Working Group 2023; International Labour Organization [ILO] 2024). However, despite social protection's promise, limited coverage in places coupled with financing gaps in low-income countries, combined with escalating climate impacts, risk leaving large segments of the poor and vulnerable unprotected (Costella and McCord 2023).

The climate funds are experiencing significant growth, driven by an increasing global recognition of the need to finance climate action. At climate conferences, such as the Conference of the Parties (COP), countries and organizations frequently announce new financial pledges, including those at COP29, and major climate funds have seen substantial increases in their funding cycles, with countries pledging billions of dollars to support their initiatives (Green Climate Fund [GCF] 2023). The main funds consist of five large facilities. The first is the GCF itself, the single largest vehicle financing both mitigation and adaptation. The second is the Global Environment Facility (GEF), which also hosts two adaptation-specific trust funds—the Least Developed Countries Fund (LDCF), designed for LDC priorities, and the Special Climate Change Fund (SCCF), open to the small-island and developing-countries group. The Adaptation Fund, created under the Kyoto Protocol and now formally aligned with the Paris Agreement, represents a third channel by offering grants for concrete, locally led adaptation projects. A fourth facility, the Climate Investment Funds (CIF), organizes its resources into thematic windows; of these, the Pilot Program for Climate Resilience (PPCR) provides the principal adaptation stream. Finally, a new Fund for Loss and Damage, agreed at COP28 and expected to become operational soon, will address climate-related losses that exceed the limits of adaptation. All stress the need for flexible, comprehensive solutions at scale to address immediate climate disasters and slow-onset changes. They support investments that reduce vulnerability through risk management, ecosystem restoration, and sustainable practices, while promoting

1 The Sahel is a semi-arid belt of land that stretches east–west across Africa, forming a transition zone between the Sahara Desert to the north and the savannas of Sudanian Africa to the south. It spans roughly 5,400 kilometers (3,300 mi) and includes parts of Senegal, Mauritania, Mali, Burkina Faso, Niger, Chad, and Sudan.

household-level and community-based strategies for disaster preparedness and livelihood diversification. Implementing these activities and rapidly getting resources into the hands of those most affected by climate impacts, remains challenging. These challenges stem from complex approval processes, the need to align funding with national priorities, and the limited capacity of local institutions to absorb and deploy funds effectively. Additionally, the bureaucratic and administrative hurdles associated with large-scale climate finance mechanisms often delay the timely disbursement of resources (Reuters 2024).

Social protection is increasingly recognized as a promising means to direct climate funds to enhance climate resilience and adaptation among vulnerable populations. Climate funds can support "governments in mainstreaming climate risk into social protection related development spheres and aligning social security sectoral objectives with national climate and environmental strategies" (Aleksandrova 2021). Moreover, (Zetterli et al. 2024) recently highlighted that social protection systems – including social registries and delivery systems – offer a unique channel for providing climate finance equitably by directing it to the most vulnerable populations. While social protection is not yet systematically considered a key channel through which climate funds can be directed to reach the most vulnerable populations (Hopper et al. 2024), a number of climate funds have begun funding social protection-related adaptation interventions (Sengupta and Sivanu 2023).

This paper illustrates how social protection systems offer unique capabilities that can help climate funders achieve their objectives more effectively for poor and vulnerable populations in low-income contexts. These systems are well-equipped to reach large vulnerable populations, respond rapidly to climate shocks, and ensure the efficient and transparent use of funds. Beyond these core functions, they can also generate critical co-benefits, such as enhanced food security, poverty reduction, and improved livelihoods, which in turn contribute to greater stability and reduce climate-induced migration. By channeling a portion of climate funds through ASP systems, funders can leverage their reach, scalability, and flexibility to deliver targeted support directly to those most affected by climate change. Integrating climate finance with social protection can strengthen resilience, facilitate adaptation, and ensures that climate action reaches households at scale, ultimately enabling funders and governments to meet their climate goals more effectively.

This paper will present the World Bank's Sahel Adaptive Social Protection Program (SASPP) as an illustrative case study to demonstrate the operational effectiveness of social protection and why it is a good fit to support the achievement of climate fund objectives. Crucially, it shows that these capabilities, or the foundations for their deployment, often already exist and can be activated or expanded with additional focus and investment. The analysis will focus on three key dimensions:

- **Reach** – the unique attributes of social protection to target and cover populations most affected by climate change at scale, and its ability to expand during crises.
- **Efficiency** – the capacity of social protection systems to ensure transparent, accountable, and efficient allocation and disbursement of resources to vulnerable populations.
- **Impact** – the capabilities of social protection systems to reduce poverty, inequality, and vulnerability, and build the resilience of vulnerable populations.

Sahel Adaptive Social Protection Program (SASPP)

THE SAHEL IS ONE OF THE POOREST, most fragile, and climate vulnerable regions in the world. The region is characterized by rapid population growth, climate vulnerability, high poverty, inequality, food insecurity, and fragility and conflict. Over 40 percent of the Sahelian population live below the poverty line, and most Sahel countries rank at the bottom of the Human Development Index (Foreign, Commonwealth and Development Office [FCDO] 2023). Climate change is a major threat in the region, with rising temperatures and extreme weather events occurring 1.5 times faster than the global average. Around 80 percent of the Sahel's farmland is degraded, and by 2050, up to 13.5 million people could be pushed into poverty due to climate-related shocks, if urgent adaptation measures are not implemented (World Bank 2022). These challenges are exacerbated by ongoing conflict and forced displacement – with almost 4 million people forced from their homes (United Nations High Commissioner for Refugees [UNHCR] 2024). The confluence of these factors makes it increasingly difficult for already vulnerable households to cope with shocks and crises. The Sahel exemplifies a region where social protection systems are crucial, due to extreme vulnerability to climate shocks and slow onset climate change.

Since 2014, the SASPP, managed by the World Bank, has been providing support to Sahelian governments in their development of strong national ASP systems. SASPP is a flagship program, implemented by the World Bank with support from the governments of Denmark, France, Germany and the United Kingdom, that supports six countries in the Sahel – Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal – to strengthen their ASP systems. SASPP strengthens countries' capacity by investing in the four ASP building blocks (presented in Figure 1). As the recent SASPP Annual Report showed, presented in the image below, ASP has strong positive impacts on a range of outcomes such as poverty and food insecurity, productivity and livelihood diversification, human capital, and resilience to shocks – across the six Sahel countries.

In the following three sections, we look at three key features of ASP that can help climate funds to achieve their objectives.

Adaptive Social Protection (ASP) is a set of policy, instruments, and interventions that strengthens the resilience of the poorest and most vulnerable by enhancing human capital, supporting climate-resilient livelihoods, and improving responses to shocks. It targets women, children, persons with disabilities, and displaced populations, helping them prepare for, cope with, and adapt to climate risks and disasters.

ASP builds resilience through three key strategies:

- **Absorptive capacity** – helping individuals and systems withstand and manage shocks.
- **Adaptive capacity** – enabling long-term adjustments to multiple climate risks.
- **Anticipatory capacity** – strengthening preparedness through early warning systems and preemptive action.

ASP interventions fall into three complementary categories:

- **Social safety nets** – regular support to improve welfare, resilience, and human capital.
- **Economic inclusion** – promoting livelihood diversification and climate-resilient productivity.
- **Shock-responsive programs** – expanding support during climate and economic crises.

Four building blocks are critical for a robust ASP system capable of enhancing climate change resilience and effectively responding to shocks:

1) Institutional arrangements and partnerships: mechanisms to establish government leadership and coordination, define roles, and promote partners' alignment.

2) Programs and delivery systems: designed to promote resilience and respond to shocks, able to reach the poor and vulnerable and provide support in an efficient manner.

3) Data and information: dynamic social registries to ensure ASP programs can reach the poor and vulnerable, early warning systems to provide timely responses.

4) Finance: instruments that support the long-term sustainable planning and financing of resilience.

FIGURE 1. **Adaptive social protection building blocks**

Source: *Sahel Adaptive Social Protection Program (SASPP): Overview*

FIGURE 2. **SASSP infographic on impacts**

Source: Sahel Adaptive Social Protection Program, Annual Report Fiscal Year 2024

Reach: Social Protection Targets and Covers the Most Climate-Affected At Scale

BY CHANNELING RESOURCES THROUGH ASP programs, expanding their reach, or using national systems to identify and serve the most vulnerable, climate funds can be efficiently directed to those most in need, ensuring timely, efficient, and effective support at scale.

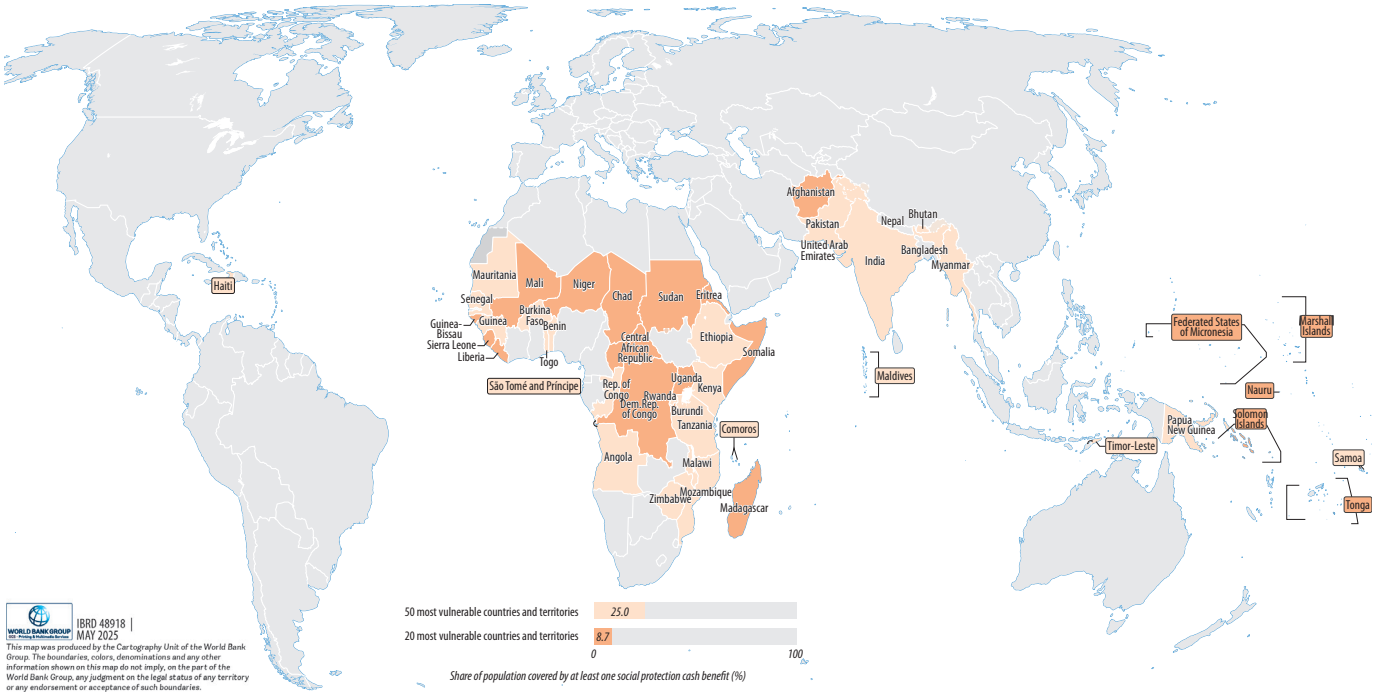
ASP reaches far and wide

Climate change is a big challenge for many low- to middle-income countries, demanding the kind of solutions that climate funds have been created to address. In many of these countries, social protection systems are often the only mechanisms that can operate at sufficient scale to reach the full range of vulnerable households and communities.

Social protection's footprint is now vast—and still widening—reaching 4.7 billion people (about three-quarters of those living in low- and middle-income countries) and recording the sharpest gains among the extreme poor in low-income countries, where coverage has risen by 17 percent in a decade. This scale is matched by large gaps: roughly two billion people remain uncovered or only minimally supported; in lower income countries, three-quarters of the population receive nothing; benefits often replace barely a tenth of household income; and women and workers in the informal economy still lag behind. And social protection coverage is significantly lower in countries most at risk from climate shocks (Figure 3). Yet the very breadth and momentum of today's systems create an extraordinary opportunity: with infrastructure in place, governments can close the remaining coverage, adequacy and equity deficits far faster than if they were starting from scratch, using social protection as a ready platform to combat poverty, build climate and economic resilience, and connect people to better livelihoods. (World Bank 2025).

In the Sahel, ASP has proven its ability to operate at scale, despite the challenges posed by a fragile context. With SASPP support, in 2023, an estimated 700,000 households – over 4.2 million individuals – were able to strengthen their resilience to future shocks and their adaptation to climate change with support from regular safety net programs. Over 1.2 million individuals across the six SASPP target countries received support in response to a shock through a national ASP program. This achievement underscores the programs' ability to provide timely and impactful support in the face of climate-related shocks. This reach is not only in service of shock response: national ASP productive inclusion interventions worked with over 100,000 households to improve their productivity and diversify their sources of incomes, thereby enhancing their adaptation to climate change. ASP programs have demonstrated their ability to function at scale in the

FIGURE 3. **Social protection coverage in the 50 countries most vulnerable to climate change, 2023 (%)**[a]



Source: ILO (2024). World Social Protection Report 2024-26

a Figure 3 combines climate-vulnerability rankings with social-protection coverage. Countries shaded solid yellow are among the fifty most vulnerable to climate change, while those overlaid with a yellow cross-hatch are in the top-twenty, highest-risk subset; all other countries are left grey. Beneath the map, two horizontal bars indicate the share of population that received at least one cash transfer in 2023. The solid bar shows that only one quarter of people living in the fifty most-vulnerable countries were covered, and the hatched bar reveals that coverage falls to just 8.7 percent for the highest-risk twenty.

Sahel, despite the challenges. However, they have not yet reached their full deployment in all countries of the region. The use of these programs to channel climate funds to the most climate affected could therefore benefit from these more holistic approaches and contribute to their maturity. Full expansion is entirely feasible, with programs, social registries, and payment systems all prepared and within reach.

ASP's targeting mechanisms effectively identify climate vulnerable and affected populations

In regions that are both severely climate-affected and disproportionately poor, ASP programs, by design, have a strong focus on those most impacted by climate change. In the Sahel, there is a significant overlap between individuals and households that are traditionally served by ASP programs – the poorest and most vulnerable – and those most affected by climate change. Indeed, ASP systems primarily focus on low-income households, informal workers, women, and vulnerable communities—groups that are also highly vulnerable to climate change due to their high exposure and limited capacities to cope with and recover from climate-induced shocks. The poor and vulnerable are typically more exposed to climate change, as they often inhabit areas more prone to climate hazards, including floodplains, coastal zones, and drought-prone regions, in addition to working in sectors that are highly dependent on climate, such as agriculture. (IPCC 2022). They are also typically less able to cope with shocks or build their resilience to climate change, with low earnings, few productive assets, limited financial assets, and constrained human capital.

A key strength of ASP systems is their targeting mechanisms, allowing climate funds to effectively identify beneficiaries in line with their priority to address climate vulnerability. ASP programs utilize various criteria and data to identify and prioritize individuals and households most in need**,** ensuring that resources are directed strategically to maximize impact, and focusing on those who are most vulnerable to climate change or affected by shocks. ASP programs typically combine categorical, geographic, and poverty targeting approaches. A categorical approach focuses on groups such as the elderly, disabled, women, or single-parent families, who are more likely to be vulnerable. A geographic approach directs resources to areas that are particularly impacted or prone to specific risks, such as natural disasters. Poverty targeting involves some form of household assessment of needs and means, often combining community-level assessment with data on income or assets.

ASP often uses digital infrastructure and data analytics to enhance the precision of targeting, in particular through the use of social registries in some countries. In the past five years, governments in the Sahel have dramatically expanded national social registries. By June 2024, the number of households with their data registered in these social registries reached an estimated 3.23 million in the region, representing around 20 million individuals. This represents about 64 percent of the poor households in the region, and registries are expected to include all the poor and vulnerable in the region within the next few years. In some countries in the region, like Mauritania, the national social registry already includes data on all the poor population, extending to non-poor but vulnerable households, providing a large pool of households which can be reached for resilience building or in response to specific shocks. Social registries allow for the efficient collection and analysis of data, when kept up to date, facilitating timely and accurate identification of beneficiaries, depending on a program's objectives. Their digitization coupled with continuous updates are crucial for maintaining accurate beneficiary information.

What Is a Social Registry?

Social registries are one part of the social protection delivery system that provide vital data for the delivery of support, information, and services to the poor and vulnerable. By enabling the systematic collection and processing of household demographic and socioeconomic data, social registries can be utilized by programs and projects to assess a range of welfare indicators including monetary and non-monetary poverty, food insecurity, disability, and vulnerability to climate events, among others. Serving as a unified gateway for registrants into a range of social protection programs, they can be harnessed by program administrators to better target the most vulnerable, increasing the impact of resilience and adaptation interventions.

ASP scales with speed and flexibility in response to climate challenges

Globally, the COVID-19 pandemic demonstrated the agility of ASP systems, which rapidly scaled up to provide critical support to vulnerable populations. Over the course of the pandemic, safety net programs achieved unprecedented coverage, reaching approximately 1.36 billion individuals globally—about one in six people (Gentilini 2022). This rapid expansion, with about 66 percent of these measures introduced in the first half of 2020, underscores the ability of ASP systems to respond swiftly to crises. Globally, during the COVID-19 response, the average time to scale up coverage (horizontal expansion) was just 26 days, while the time required to increase benefit amounts for existing beneficiaries (vertical expansion) was only 18 days (Gentilini 2022). Similar rapid deployments took place in response to natural disasters, for instance,

following the 2022 floods in Pakistan, where thousands of families received financial assistance within 10 days to help them rebuild their livelihoods.

Rapid responses are facilitated by existing ASP systems, which can be quickly adapted to meet urgent needs. These systems are in place even before disasters strike, providing a foundational layer of preparedness to channel pre-positioned finance to beneficiaries, enhancing their ability to cope with impending crises. Having strong ASP systems in place prior to the shock is critical. For example, digital payments played a crucial role, enabling 763 million people globally to receive transfers electronically, accounting for 62 percent of all monetary transfers during the pandemic. The use of existing social registries, combined with other social and tax databases, and quick data updates, demonstrated the systems' ability to leverage existing and new data efficiently. Finally, by adapting existing ASP program designs to the crisis at hand, ASP systems were able to increase their reach – governments simplified programs by converting in-kind transfers to cash, easing eligibility criteria, temporarily suspending conditionalities, and enabling digital applications.

In the Sahel, SASPP too has demonstrated significant speed and flexibility in scaling up its interventions to address crises, particularly those induced by climate change and other shocks, including the COVID-19 pandemic. In 2023, ASP programs delivered shock-response cash transfers to over 1.7 million individuals in the region, underscoring the programs' capacity to rapidly mobilize. Among these, Mauritania's shock-response program doubled its coverage to reach around 75,000 households (approximately 450,000 individuals) within a short period, while ASP programs in Senegal were used to provide temporary support to around 25,000 food insecure households and to reach around 16,000 households affected by floods. These examples demonstrate the ability of governments to extend coverage of those affected by shock, ensuring that already vulnerable populations do not fall into poverty.

Efficiency: Social Protection Enhances Efficiency, Cost-Effectiveness, and Accountability in Reaching Those Most in Need

IN THE SAHEL, ASP SYSTEMS HAVE demonstrated their ability to reduce fragmentation, enhance country ownership by strengthening national response capabilities, and promote transparency and accountability in how funds are allocated and spent. Moreover, ASP systems enable close integration with other types of responses and resilience programs, leading to higher cost-efficiency.

ASP systems strengthen country ownership, promote coordination, and reduce fragmentation

Under national leadership, ASP systems in the Sahel have effectively coordinated support from both development and humanitarian partners. By offering clear frameworks that all partners can follow, ASP systems have reduced duplication and fragmentation, while promoting complementarity among efforts. This has resulted in more efficient allocation of resources.

Support can take various forms: some partners channel resources directly through government programs, while others operate in parallel but align with national priorities. For example, organizations like the World Food Programme (WFP) and United Nations Children's Fund (UNICEF) implement programs in Burkina Faso, Mali, and Niger using national social registries to identify beneficiaries, enhancing the coverage of government programs. In Burkina Faso, Chad, Mali, Mauritania, and Niger, these efforts provide critical interventions such as monetary transfers, nutritional support, and resilience programs in areas affected by conflict, displacement, and seasonal food insecurity. In addition to relying on national instruments such as the social registries, these programs use national parameters to align their support with national programs, ensuring equitable coverage. By coordinating these efforts under national leadership, ASP systems ensure that resources are more effectively directed to address the impacts of climate change and shocks.

ASP systems enhance transparency and accountability in resource allocation and disbursement

Another strength of ASP systems lies in their foundation within robust legal and regulatory frameworks, ensuring consistency and long-term sustainability. Anchored in national laws, these systems are fully integrated into government policies, just like essential services such as basic education and healthcare. This legal grounding provides a stable and enduring mechanism for the delivery of climate funds to the most climate-affected populations, preventing reliance on ad hoc, temporary interventions that could be easily disrupted. In Mauritania, for example, the social registry, national safety net program, and shock response program are all legally established. Additionally, the National Fund for the Response to Food and Nutrition Security (FNRCAN) is a government financing tool that has been created to pool resources from the national budget, insurance payouts, donor support, and climate funds, with clear regulations governing how these funds are allocated and transferred to climate-affected groups.

Transparency and accountability are at the core of ASP. These systems rely on advanced tools, such as digital Management Information Systems (MIS) that handle beneficiary data and track payments, and national social registries that identify households most affected by shocks. Grievance redress mechanisms (GRM) are also in place, allowing beneficiaries and communities to report and resolve issues, further enhancing the transparency and accountability of the system. These digital systems facilitate evidence-based decision-making by providing a transparent mechanism for targeting social safety net transfers, as well as services provided to vulnerable beneficiaries, ensuring that resources reach those most in need.

Digital payment platforms play a crucial role in promoting accountability and traceability. They not only provide secure and efficient fund transfers, but also create an auditable trail of transactions, minimizing the risk of misallocation or fraud. Detailed reports on disbursements enhance transparency and provide funders with confidence that their contributions are reaching the intended beneficiaries. These platforms are essential for ensuring timely shock-response transfers, allowing assistance to be delivered before shocks cause irreversible damage. These systems also benefit regular social safety net programs by ensuring predictability and reliability of support, providing an entry point for financial inclusion interventions such as savings, credit and insurance products.

Monitoring and evaluation (M&E) are central to the success of ASP systems in the Sahel. These systems have dedicated M&E units, conducting regular audits, and undergoing independent reviews. Governments in the Sahel have also pioneered innovative M&E program designs tailored to the region's specific climate vulnerabilities and fragilities. A wealth of impact evaluations has helped identify the most efficient and effective approaches tailored to the vulnerable and fragile Sahelian context, ensuring a transparent and strategic selection of interventions to maximize impact.

ASP integrates multiple interventions enhancing their utility

ASP systems provide a versatile delivery mechanism for multiple interventions to climate-affected populations, regularly engaging with the poorest and most vulnerable at scale, through established structures such as social registries, payment platforms, and frontline service providers. This local-level capacity for delivering essential services can be leveraged for broader outreach, making ASP systems invaluable public goods. By efficiently reaching those most impacted by climate change, ASP systems facilitate the integration of complementary interventions. Beyond safety nets, shock-response efforts, and economic inclusion programs, ASP systems can also deliver a diverse range of services—from climate shock alerts

to agricultural advice, market information, financial inclusion initiatives, and, in the Sahel, health insurance, agricultural subsidies, nutrition services, scholarships, public transport, or access to electricity networks. This creates a synergistic effect, amplifying the impact of both ASP programs and other critical services in building resilience.

The integration of early warning systems and emergency response within ASP systems enhances their ability to address climate-related shocks. By utilizing climate information and early warning systems to trigger ASP responses, these programs can act proactively. In the Sahel, ASP responses are anchored in national response plans[2]. Using triggers based on timely early warning system data, for example, Niger was able to prevent depletive coping strategies by the poorest and most affected by deploying a shock response intervention four months earlier than traditional humanitarian support. Data on climate change and food insecurity helps identify areas of greatest need, allowing for the pre-positioning of resources for timely support, and guiding resource allocation to specific regions. Furthermore, climate and food security data inform the deployment of social registries, to scale up rapidly during crises to bring new households into the program. Ultimately, embedding climate data into shock-responsive program design ensures that assistance reaches climate-vulnerable households swiftly and effectively.

2 National response plans are government-approved contingency frameworks that translate early-warning analysis (such as the Cadre Harmonisé in the Sahel) into pre-agreed thresholds, actions and budgets. They spell out who does what—and with which resources—once a climatic or food-security indicator crosses a trigger, allowing social-protection and humanitarian actors to deploy assistance rapidly and in a coordinated manner.

Impact: Social Protection Can Enhance Climate Outcomes

ASP PROGRAMS HAVE THE POTENTIAL to ensure that funds achieve maximum impact once they reach the intended beneficiaries, putting them on a new, improved trajectory, by enhancing their resilience capacity to respond to climate shocks and supporting long-term adaptation efforts. In the Sahel, ASP programs, by combining various program modalities, not only had positive impacts on economic and non-economic outcomes but also enhanced households' anticipatory, absorptive, and adaptive capacities.

ASP is holistic by integrating resilience building, shock-response, and climate adaptation

In addition to regular safety nets and shock-responsive programs, ASP encompasses a broader range of interventions designed to build livelihoods and foster climate resilience and adaptation. By integrating economic inclusion and human capital development measures, ASP strengthens safety nets, driving sustainable and resilient development and preparing communities for future shocks and climate change.

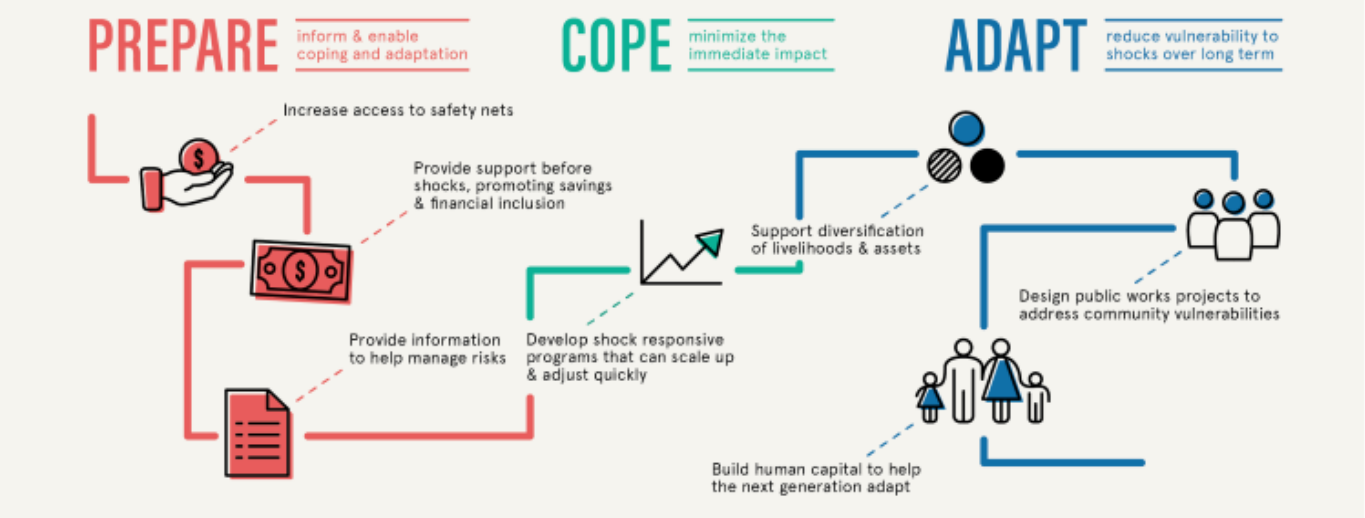
In the Sahel, governments deploy three key ASP program types to build resilience and support vulnerable households:

1. **Social safety nets**: Provide regular assistance to improve welfare, strengthen climate resilience, and support human capital development.
2. **Economic inclusion interventions**: Boost productivity and promote the diversification of income-generating activities that are climate-resilient.
3. **Shock-responsive interventions:** Offer temporary support to households affected by climate and other shocks.

These program interventions complement each other to address both poverty and climate vulnerability, offering multidimensional support such as increased incomes, asset growth, and diversified livelihoods. By strengthening households' ability to anticipate, absorb, and adapt to shocks, ASP enables communities to recover from crises and transition toward more resilient livelihoods. The integrated approach also contributes to long-term climate change adaptation. For example, in the Sahel, programs like Mauritania's Tekavoul and transfer initiatives in Burkina Faso, Niger, and Senegal, combine shock-responsive components with sustainable agricultural practices. Ethiopia's Productive Safety Net Programme demonstrates how these interventions stabilize food security and prevent harmful coping strategies, while longer-term safety nets help households build more resilient livelihoods.

Beyond immediate relief, ASP programs strengthen long-term resilience by reducing reliance on emergency support and enabling earlier, more cost-effective responses to climate shocks. By

FIGURE 4. **ASP builds various resilience capacities of vulnerable households**



Source: World Bank (2020).

supporting climate-affected households before crises escalate, ASP helps avoid irreversible losses to protect both livelihoods and community stability.

Additionally, ASP can empower beneficiaries through training in climate-resilient practices, supporting transitions into green jobs and sustainable economic activities. In Mauritania, for instance, monetary transfers combined with productive inclusion has raised household and entrepreneurial income, significantly enhancing women's economic empowerment. In Niger, combining monetary transfers with productive measures led to an increase in household consumption compared to monetary transfers alone. Public works programs complement these efforts by providing temporary employment in climate-resilient projects, such as building irrigation systems, flood defenses, and reforestation, all of which support sustainable agriculture and environmental conservation.

ASP is impactful, with high rates of return

ASP programs are essential to reducing poverty, addressing the impacts of shocks, promoting resilience to climate change, and promoting social and economic outcomes for vulnerable communities. The range of ASP impacts is broad – from reducing poverty and inequality, enhancing women's economic empowerment and strengthening human capital to increasing incomes and earnings, supporting the diversification and adaptation of livelihoods, improving financial inclusion – and extending to impacts on social cohesion and growth in local economies. Adapting programs that were initially developed in other regions, ASP has demonstrated its ability to deliver in a cost-effective manner including in fragile contexts. There is extensive evidence of these impacts in the Sahel, where tailored programs have demonstrated significant returns on investment.

There is extensive evidence of these impacts in the Sahel, where tailored programs have demonstrated significant returns on investment and strong and measurable effects on the welfare, food security, and resilience of beneficiaries, particularly among those vulnerable to climate shocks. In Senegal, for example, safety nets have reduced extreme poverty in rural areas by five percent in three years and reduced the poverty gap by 11 percent for poor households. In Niger, productive inclusion led to a remarkable increase of 60 to 100 percent in per capita consumption, even 18 months after the program ended. Similarly, in Chad, consumption per capita rose by 60 percent within 12 to 18 months of the program's introduction. These examples highlight how ASP interventions can substantially improve household consumption and protect against economic downturns. Moreover, ASP programs have proven effective in shielding vulnerable households from climate-related shocks. In Niger, during a recent drought, households that were not protected by ASP saw their consumption decrease by 24 percent. By contrast, those benefiting from ASP programs were able to maintain their consumption levels and safeguard their assets, illustrating the critical role ASP plays in preventing families from falling deeper into poverty during crises. In Mali, ASP beneficiaries were 57 percent more likely to increase their savings and 46 percent more likely to invest in productive assets, significantly strengthening their resilience to climate change and enhancing their ability to confront future shocks.

The impacts of ASP extend beyond immediate economic improvements to influence future generations and foster long-term development. Evidence from the Sahel mirrors global findings that social safety nets significantly improve health and education outcomes. These programs typically incentivize regular health check-ups and school attendance, leading to improved health and higher educational attainment over time. For instance, in Senegal, three years after the introduction of monetary transfers, beneficiary households experienced a seven percent increase in their consumption of protein-rich foods, a key indicator of improved food security and nutrition. In Mali, the likelihood that a teenage girl enrolled in school would progress to the next grade rose by 56 percent among those benefiting from ASP programs.

Beyond individual beneficiaries, ASP programs have broader positive impacts on social cohesion and local economies, fostering stronger, more resilient communities. Their impacts on local economies are significant, with increases in local economies between 130 percent and 250 percent of the transfer value in Africa, a remarkable rate of return. These programs act as a lifeline for those most affected by climate change, promoting economic stability, environmental sustainability, and long-term societal resilience.

ASP is an engine for resilience through financial inclusion

One crucial yet often underemphasized factor in building climate resilience is access and use of formal financial services, such as savings, credit, and insurance. Although financial inclusion may not initially appear central to a climate funder's objectives, it is integral to maximizing and sustaining the impact of climate investments.

While ASP programs seldom promote financial inclusion as an explicit goal, they depend on financial services for their day-to-day operations—particularly when it comes to disbursing benefits. Beyond payments, they implicitly acknowledge the value of financial inclusion by incorporating instruments like savings, credit, and sometimes insurance into their economic inclusion approaches. These tools not only help beneficiaries manage day-to-day needs but also enable more significant investments in climate resilience. For instance, smallholder farmers who have access to affordable credit can purchase drought-resistant seeds or adopt solar-powered irrigation systems, while microinsurance allows them to recover more swiftly from environmental shocks. In turn, households that can save regularly—whether through

formal accounts or mobile wallets—have a stronger buffer against unexpected climate-related expenses.

Because ASP programs are designed to serve the poorest and most climate-exposed populations, they offer an unparalleled platform for scaling up financial inclusion in ways that directly support climate adaptation and resilience. By digitizing government-to-person (G2P) payments and linking them to formal financial accounts, ASP programs effectively bring vulnerable households into the financial sector—a process that also generates valuable data for tailoring more advanced climate-focused products. These might include index-based insurance, weather-linked loans, or specialized savings programs for home upgrades and other adaptive measures.

In the Sahel, several programs have demonstrated remarkable ability to engender savings. In Burkina Faso, a simple cash transfer program—without additional support mechanisms like productive inclusion or information sessions—led to a 134 percent increase in participation in savings groups and a 65 percent increase in informal savings just 12 to 15 months after the program ended. In Niger, beneficiaries of a regular safety net program were 92–93 percent more likely to participate in savings groups and saved significantly more (an additional 365–420 CFA per month) even 18 months after the program ended. Similarly, in Mauritania, participation in savings groups increased by 62.5 percent following a safety net intervention. Overall, increases in savings play a critical role in increasing households' resilience to shocks, and in promoting greater productivity and incomes.

Senegal provides further evidence of the potential of ASP programs to promote financial inclusion. A safety net program in the country improved women's access to microcredit and loans, while a productive inclusion program resulted in a 124 percent increase in household savings 18 months after its conclusion and a 92 percent increase 36 months after. These programs not only boosted total savings but also enhanced the functionality and activity of savings groups, as evidenced by increased borrowing, lending, and fund utilization by members. In Mali, participants in a safety net program were 57 percent more likely to save compared to non-participants, even 18 months after the program ended.

More broadly, evidence from programs in places like Kenya, Bangladesh, India, and Ethiopia shows that combining financial tools (savings, credit, and insurance) with social protection can stabilize livelihoods and foster long-term resilience—yet such large-scale models remain relatively rare. One reason ASP is so promising is its ability to address both demand- and supply-side obstacles. On the demand side, beneficiaries may have irregular incomes, low financial literacy, or limited access to technology; however, ASP field staff and support services can bridge these gaps by providing financial education and hands-on guidance. From the supply perspective, remote or low-income populations can be risky or unprofitable for financial service providers—but ASP programs can subsidize expansion, offer robust targeting data, and help tailor products to beneficiaries' specific risks, such as weather-index insurance for smallholder farmers. Ultimately, advancing financial inclusion via ASP programs should be recognized as a cornerstone of effective climate adaptation, not an afterthought.

Recommendations

WHILE THIS PAPER HIGHLIGHTS THE significant potential of climate funds harnessing social protection systems to enhance resilience and adaptation, several challenges must be addressed for effective implementation. A fundamental challenge is the remaining coverage gap in social-protection systems—particularly in low-income and climate-vulnerable countries—despite their rapid growth over the past decade. Large segments of the population, especially informal workers, displaced people and communities living in climate-exposed areas, still lack any form of protection. Climate finance can both piggy-back on existing programs and finance the extension of coverage to those left out.

Institutional coordination remains a key hurdle, as ministries of environment or climate change and ASP systems often operate in silos, limiting cross-sectoral collaboration. Ensuring financial sustainability is another concern—while climate funds can provide critical support, they are often project-based and time-bound, raising questions about long-term viability. Additionally, targeting mechanisms need further refinement to ensure that coverage expansion prioritizes those most vulnerable to climate change, including informal workers and displaced populations, are effectively reached. Finally, striking the right balance between rapid shock responses and long-term resilience-building and strengthening monitoring systems to track adaptation outcomes are essential to ensuring impact.

This paper aims to demonstrate the value of leveraging ASP systems for climate action, and these challenges should be central to discussions among funders, governments, and practitioners. Addressing them will be key to scaling solutions that provide both immediate relief and sustained resilience for climate-affected populations. The recommendations below outline concrete steps that climate funders and governments can take, from improving institutional coordination to embedding financial inclusion and early warning mechanisms into ASP systems.

Some key questions to guide this conversation include:

- How can governance and institutional alignment between national ASP and climate actors be organized for effective implementation?
- What financing models can ensure the long-term sustainability of ASP systems while leveraging climate funds?
- How can ASP programs refine targeting mechanisms to better reach those most vulnerable to climate change?
- What strategies can balance short-term shock response with long-term resilience-building?
- How can M&E systems be strengthened to track the climate adaptation impact of ASP interventions?

Climate Funds

- Climate funds should view **social protection systems as key to achieving their objectives** because they enable faster disbursements, accurate targeting of vulnerable populations at scale, ensure transparent and efficient fund allocation, and enhance the impact of funds by enhancing beneficiaries' capacity to respond to immediate climate shocks, build resilience, and support long-term adaptation efforts. With climate funding likely to rise, social protection provides a ready option for these funds, especially in regions like the Sahel, where no other system can reach the most vulnerable at scale.
- In line with their stated objectives, when routing funds to individuals, climate funds should **leverage existing national infrastructure** to the greatest extent possible. Utilizing established systems, such as national social protection programs, banking networks, and digital payment platforms, can streamline the disbursement process, reduce transaction costs, and ensure timely delivery of funds. This approach not only capitalizes on the efficiencies of existing infrastructure but also strengthens the legitimacy and accountability of climate finance initiatives by aligning them with national priorities and capacities.
- In cases where national infrastructure is limited, climate funds should prioritize **investments at the country level to build or enhance social protection systems**. Strengthening these systems involves enhancing targeting capabilities, administrative capacities, developing technological solutions, and fostering institutional frameworks that can efficiently manage and distribute funds. By investing in social protection infrastructure, funds can create a sustainable mechanism for targeting and channeling climate finance to the most climate-affected individuals not only for its own purposes but also for others. This not only improves immediate resilience but also builds long-term adaptive capacity, by ensuring support structures are in place for future climate-related challenges.
- **Climate funders should integrate an explicit focus on financial inclusion into their climate investments**, recognizing it as necessary for resilience at scale. Collaborating with governments and ASP programs to embed digital payments, savings, and credit into ASP platforms ensures that vulnerable populations can access the financial tools needed to adapt. Funders can offer incentives—such as grants, partial guarantees, or technical assistance— to encourage financial service providers to reach low-income communities sustainably. Equally important is investing in innovation and rigorous testing of new approaches, building a stronger evidence base to demonstrate what works to strengthen resilience through financial inclusion.
- Climate funds should **invest in innovation,** including initiatives promoting increased linkages with forecasting systems. By integrating early warning systems and climate forecasting data with social protection mechanisms, funders can enable early responses to climate threats, such as timely disbursements before a predicted drought or flood. By ensuring funds are pre-positioned to respond to shocks, climate funds can promote such early action based on triggers informed by climate data.
- Climate funds will also have a crucial role in **knowledge sharing**. By sharing successful strategies, technologies, and practices among different projects and regions, funds can enhance the impact and scalability of innovative approaches. This includes creating platforms for knowledge exchange, supporting collaborative research, and fostering partnerships between different stakeholders. By promoting cross-fertilization, funds can ensure that the benefits of successful innovations are maximized and widely adopted, leading to more robust and comprehensive solutions for climate resilience and adaptation.
- To achieve greater scale and impact, funds should **collaborate** with each other and coordinate their support to, and use of, national social protection infrastructure to channel assistance to those

Climate Funds (continued)

most affected. This collaboration can help avoid duplication of efforts and ensure a coherent approach to social protection and climate resilience. By pooling resources and sharing best practices, funders can collectively enhance the impact and efficiency of the interventions they support.

Coordinated efforts can also lead to more significant investments in national capacities, ensuring that social protection systems are robust and adaptable to the evolving challenges posed by climate change.

Governments and National Social Protection Systems

- Governments must recognize the vital role ASP systems play in enhancing resilience and adaptation to climate change. **Incorporating social protection into domestic climate strategies**, such as Nationally Determined Contributions (NDCs), Adaptation Communications (ACs), and National Adaptation Plans (NAPs), is essential. By integrating these measures into their frameworks, countries can better align their climate and development goals, ensuring a comprehensive approach to mitigating the impacts of climate change on vulnerable populations.
- To attract climate funders, governments need to **invest in and strengthen their social protection systems**. This includes enhancing their targeting capabilities to ensure they can pick out the most climate vulnerable. Expanding the coverage of social protection programs is also crucial. By reaching more individuals and communities, especially in areas most affected by climate change and shocks, governments can provide a safety net for a larger portion of the population, enhancing overall resilience against climate risks. Moreover, a robust social protection infrastructure must be capable of both horizontal and vertical expansion. Horizontal expansion broadens the scope of programs to include more beneficiaries, while vertical expansion enhances the depth of benefits provided. This adaptability ensures that the system can respond to varying needs and circumstances, particularly during climate-induced crises.
- Transparency and accountability are key factors in attracting climate funders. **Establishing rigorous social registries, management systems, payment systems, grievance redress mechanisms as well as M&E frameworks** is essential to allocating climate funds, ensuring these funds effectively reach their intended beneficiaries, monitoring the actual distribution of funds, and measuring their impact accurately. Such accountability and transparency builds trust with funders and encourages continued and increased investment.
- Investment in **systems that can be used by all key actors** is central to the efficient functioning of social protection programs. They facilitate the integration of interventions, ensuring alignment and effective coordination. This integration makes it easier to scale up efforts and maximize impact. Beyond the coordination of support, open payment platforms are essential to support the use of multiple financial service providers for fund disbursement. Flexibility allows beneficiaries to choose their preferred provider, improving user experience and promoting competition, potentially leading to better services and lower costs. Additionally, systems designed to be flexible and interoperable enable various stakeholders, including non-governmental organizations (NGOs), private sector players, and international organizations, to integrate their efforts with national programs, amplifying the impact of climate funds. This collaborative approach enhances coordination, reduces duplication, and ensures a more effective response to climate challenges.

By harnessing the power of adaptive social protection, climate funders and governments have a unique opportunity to deliver support faster, smarter, and at scale, reaching those most vulnerable while strengthening long-term resilience. Social protection systems are the kind of big answer needed to answer the big questions posed by climate change, combining reach, flexibility, and long-term impact in a way few other systems can match. With bold action and greater coordination, social protection can become a cornerstone of climate adaptation strategies, ensuring no one is left behind in the face of accelerating climate change.

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