





Social protection and climate change

WFP Regional Bureau for Latin America and the Caribbean's vision to advance climate change adaptation through social protection



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Foreword

The impact of climate change in Latin America and the Caribbean (LAC) will be considerable. This is due to the region's economic dependence on agriculture and the low adaptive capacity of its population in the face of multiple regional climate risks such as sea level rise, glacial melt and extreme weather and disease outbreaks. This vulnerability is exacerbated by recent socio-economic trends including high inequality, population growth and accelerating urbanization.

The 2030 Agenda for Sustainable Development sets out to promote efforts by national governments to build the resilience and adaptive capacity of the poor and those in vulnerable situations as well as promoting integration of climate change measures into national policies, strategies and planning. It also points toward the creation of social protection systems that allow all people to enjoy basic standards of living.

Climate change adaptation needs to be framed in terms of social justice. This requires improved understanding how social protection can support the adaptation to climate change of the most vulnerable and poor households and achieve poverty reduction.

It is in this context that the World Food Programme (WFP) has developed this think-piece in collaboration with Oxford Policy Management (OPM). Its objective of providing a better understanding of how social protection can support climate change adaptation of poor and vulnerable households. The paper not only reviews the different theoretical frameworks that analyse the linkages between social protection and climate change, but also identifies several entry points and design considerations for specific social protection instruments to enhance climate change adaptation. It also provides a description of some of the climate-related activities that could be linked to social protection programming.

We hope that this paper and the concepts, principles and instruments it presents can help inform country-level planning of technical assistance within countries in the Latin American and Caribbean region and beyond. We also hope that this study contributes to global debates and enhanced understanding of linkages between social protection and climate change adaptation.



Miguel Barreto

WFP Regional Director for Latin America and the Caribbean

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Executive Summary

Knowledge on how social protection can both increase resilience to climate change of the most vulnerable and achieve poverty reduction is key to pursuing policies that frame adaptation in terms of social justice.

A few frameworks have been developed to understand what risk-informed social protection looks like and to explore how to link it with disaster risk management and climate change resilience approaches.

This think piece sets out a vision of how social protection can support households to face climate change and shows how climate change presents distinctive challenges to social protection programming, often differing from those of other disasters and shocks

Our starting point is that given the uncertainty around climate change, social protection represents a key form of low regrets investment, one which balances supporting poverty alleviation and simultaneously addressing vulnerability to climate change.

The rationale of this vision is that social protection should improve or support households' adaptation to climate change. This entails:

- Recognising climate change uncertainty.
- Prioritising food security and nutrition considerations.
- III. Supporting households' long-term adaptation strategies.
- IV. Avoiding maladaptation.
- V. Understanding trade-offs.
- VI. Defining resilience objectives.
- VII. Improving the environment.
- VIII. Adjusting programmes to context.
- IX. Acknowledging even small contributions.
- Working across disciplines.

Linkages with key climate change activities that can foster adaptation are presented.

- Climate change projections and models. Given how the specific effects of climate change are difficult to predict, social protection practitioners must learn to plan for uncertainty. Climate models can assess current and future climate variability, enabling a better understanding of vulnerability assessments, including effects on food security and malnutrition. These assessments can then help to inform different social protection options and ensure these are viable in a variety of possible scenarios and avoid maladaptation.
- Especially for predictable crises, early warning systems (EWS) can help to build resilience by responding to crises before they occur. Early action systems are

designed to trigger anticipatory action prior to an emergency to mitigate impacts and increase resilience to shocks. Using and linking EWS with existing social protection schemes can enhance their impact in protecting livelihoods of at-risk populations. Thus, they may mitigate anticipated shock impacts.

- · If properly linked with national social protection systems, Forecast-based Financing has the potential to not only help smooth climate-related shocks, avoiding set-backs in development, but also to enable poor and vulnerable people to manage climate risks more effectively and in a proactive manner. This includes connecting the social protection system with predictable finance that allows it to become more selfsustaining over time.
- Climate risk insurance could play an important protection and promotion role for poor households exposed to climate risk. In combination with robust social protection, climate risk insurance can protect people from different types of shocks and levels of vulnerability. The security afforded by insurance could enable people to take smarter risks and boost their productivity, building pathways to prosperity.
- As a complement to these activities, **Social Behavioural Change and Communication interventions (SBCC)** can be linked to social protection programmes with the purpose of supporting behavioural change towards adaptation, considering the different enabling factors and barriers to climate change adaptation. These actions aim at addressing some of the values, preferences and social norms that influence a behaviour, including maladaptation.

A crucial element for this pillar is ensuring **coordination** and collaboration among climate change, disaster risk management and social protection. Ensuring complementarity of systems, instead of overloading or duplicating, can be a first step. A strong information system that collects information and data on production, productivity and challenges will also support coordination.

Some experiences in standalone social protection provision provide a good entry point from which to support climate change adaptation and resilience. Differential design and implementation features that can help to explicitly enhance adaptation to climate change in standard social protection programmes are explored. It should be stressed that new climate change adaptation programmes should be tailored to the country or regional context:

· Social transfers can include both cash and in-kind transfers. The literature has identified these type

of programmes as meriting more research and development of potential to enhance resilience. They can be effective tools to support people's access to food, resulting in higher consumption of better-quality food, including climate change. Cash transfers can support the anticipation of risk, which enhances adaptive capacities of households. Cash can be accumulated as savings and as a self-insurance mechanism which can then be drawn upon and liquidated at times of crisis. Social transfers require several design considerations such as predictability, flexibility, value and duration if they are to sustainably foster adaptive capacity.

- School-feeding programmes. These increase access to and consumption of quality food for students and free up resources that can improve food security for their families. This contributes to reduced drop-out rates and improves adult job prospects by increasing children's human capital. The schools provide local farmers with a predictable outlet for their products, leading to a stable income, more investments and higher productivity. The programme can also create access to predictable markets and livelihood opportunities for small holders in the same communities. Many of those benefits also have influence on the adaptive capacity of rural populations. School feeding can provide a platform for delivering other services and reaching schoolchildren, promoting knowledge and innovations, and strengthening capacities of households and communities whilst advancing successful outcomes for climate change adaptation.
- · Asset-creation programmes, (through livestock investments)¹ seek to improve food security and boost income of the poorest. When it comes to climate change there have to be trade-offs. As an example, livestock production has a high carbon 'hoofprint', specifically methane produced by animals. Recent studies have proposed different options for improving livestock feeding, as a means of boosting production of meat and milk whilst simultaneously reducing greenhouse gas (GHG) emissions. It has become evident that grasses have climate-friendly qualities, preventing soil erosion and storing more carbon in their deeper root structure, thus impeding the release of nitrous oxide, a potent GHG, from soils.

- Public-works programmes, have potential to enhance the adaptive capacity of households through creation of assets that could increase resilience to future shocks, either by enabling livelihood diversification and adaptation or by better protecting from the shock itself. In order to succeed, public works programmes need to ensure a coherent theory of change, aligned with climate change adaptation and disaster risk reduction and identify where community assets can have longerterm impact on livelihoods. The programmes should be regular rather than being just temporary or onceoff. Moreover, the transfer size, targeting, scalability, quality of assets, consideration of local context and the synergies with other interventions will also influence the potential impact on resilience.
- Integrated programmes, including cash plus **programmes** could support adaptation through promotion of income-generating activities and livelihood diversification. These can develop resilience in the face of threats, promoting opportunities and strategies to deal with future risks. Transforming productive livelihoods, along with protecting and adapting to changing climate conditions as opposed to merely reinforcing coping mechanisms, is key. These activities can support adaptive capacity because they provide sustainable economic opportunities in the face of environmental change. These programmes should also provide a means towards stronger livelihoods. This does not mean that people should exit traditional livelihoods which are considered climate-sensitive. There is evidence that these livelihoods also strengthen household resilience. That said, the potential gains of spreading risk through diversification need to be weighed in relation to the opportunity costs of divesting from high-return activities.

WFP can then engage in the provision of technical assistance and policy support, as well as facilitate dialogue among different institutions and partners to support more climate adaptive social protection programmes. Given that this is an emerging area, a priority is to raise awareness. Informal workshops, field visits, and regional South-South tours and dialogue are likely also to be useful. The focus is to increase knowledge about social protection through dissemination of good practice and learning from specific examples.

Not to be confused with Food Assistance for Assets (FFA) programmes. In this study, asset accumulation programmes are understood as programmes implemented by national governments and that focus on livestock investments.

Introduction

Among the most significant impacts of climate change is the potential increase of food insecurity and malnutrition. Findings from the Intergovernmental Panel on Climate Change (IPCC) indicate that climate change could increase the risk of hunger and malnutrition by up to 20 percent by 2050. Changing climate patterns could result in crop and livestock failure and therefore affect calorie consumption, diet quantity and diet diversity. Climate-related shocks impact dietary diversity and reduce overall food consumption with overall longterm detrimental effects including stunting. Climate change could exacerbate health problems through changing disease patterns, as well as inadequate care practices due to livelihood pressures on mothers. Similarly, droughts can result in loss of certain types of nutritious food and impact malnutrition rates (WFP 2014). Moreover, pressure of diseases and pests is forecast to increase,² along with a reduction in the availability of water for food production and other uses in the semi-arid zones and tropical Andes (ECLAC 2016).

Severe weather events, such as storms and hurricanes in Central America and the Caribbean, are also set to rise in frequency. During the 2000s there were 39 hurricanes in Central America and the Caribbean basin, compared to 15 during the 1980s and just nine during the 1990s.

LAC will also experience further sea-level rises, which are reported to have varied from two to seven 7 mm/ year between 1950 and 2008. Under a low emissions scenario this will likely be in the range of 26-55cm by the last two decades of the 21st century and 45-82 cm in a high-emissions scenario. This will add to the risk of significant damage from storm surges associated with these tropical storms (IPCC 2013; ODI 2014) and will especially impact small island states in the Caribbean. Moreover, several million people live in the path of hurricanes and in coastal zones rendering them vulnerable to sea-level rise, storm surges and coastal flooding (McGranahan et al. 2007; Trab Nielsen 2010).

Climate change is expected to accentuate preexisting vulnerabilities and inequalities. MMany population groups, in particular indigenous groups and people of African descent, are socially excluded and have limited political influence, fewer capabilities and opportunities for participating in decision and policy making and are thus less able to leverage government support to adapt to climate change (Moser and Ekstrom 2010). This also applies to people with disabilities, women, children, older people, indigenous group, and others marginalised due to their identity (Chaplin et al. 2019).

The rural poor in general are at risk of being those most affected by climate change due to the combination of social and climatic factors that exacerbate their vulnerability. In 2010, the rural poverty rate was twice as high as that of urban areas. In terms of extreme poverty, it was four times as high (IFAD 2013). The occurrence of climate shocks and stresses, such as unseasonal droughts, changing and delayed or lengthened seasons, hurricanes or floods, negatively affects rural livelihoods and assets, in turn reducing wellbeing. Their reliance on small-scale, rain-fed agriculture, natural resources, traditional knowledge systems and culture and their poor access to infrastructure and technology make the rural poor highly vulnerable to climate change (Reyer et al. 2015).

Climate change adaptation raises critical issues of social justice since the people who will suffer the most from the negative impacts of climate change are also those who have tended to contribute the least to greenhouse gas emissions. "At stake are issues of fairness in the responses to a large global externality; the need to protect past and future gains from development; and potentially serious global repercussions of failing to address climate change effectively" (Heltberg et al. 2009:90). Climate change and its multiplying and indirect effects remains highly uncertain, and therefore highly unpredictable.3 Therefore, countries need to adapt to uncertainty. If adaptation is not possible or sufficient, then there will be losses and damages.

This applies as much to human diseases as to agricultural pests, for example the coffee rust that has devastated coffee crops across Central America as the mountainous areas favoured by coffee growers have become warm enough to host the fungus even at altitudes of up to 5,000 feet.

According to the IPCC (Kunreuther et al 2014), there are uncertainties in terms of climate responses to CHG emissions and their associated impacts. There are even greater uncertainties with respect to the impacts of changes in the climate system on humans and the ecological system as well as their costs to society. There are similar uncertainties regarding both historical and current GHG sources and sinks from energy use, industry and land-use changes. Knowledge gaps make it especially difficult to estimate how the flows of greenhouse gases will evolve in the future under conditions of elevated atmospheric CO2 concentrations and their impact on climatic and ecological processes. The deployment of technologies is likely to be the main driver of GHG emissions and a major driver of climate vulnerability. There are uncertainties as to how fast learning will take place, what policies can accelerate learning and the effects of accelerated learning on roll-out of new technologies.

Countries have made progress in incorporating climate change adaptation into development policies, plans and programmes The Paris Agreement, within the United Nations Framework Convention on Climate Change (UNFCCC),⁴ aims to strengthen the global response to the adverse effects of climate change on people and ecosystems. This includes limiting the increase in global average temperature to well below 2 °C above pre-industrial levels and increasing the ability of public and private sector institutions to adapt to increasingly adverse circumstances. The Paris Agreement recognises adaptation as a key component in the long-term global response to climate change to protect people, livelihoods and ecosystems (Article 7).

The 2030 Agenda for Sustainable Development⁵ incorporates the importance of promoting efforts by countries to "build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters" (Goal 1, SDG, 2015). It seeks to take urgent action to "strengthen resilience and adaptive capacity to climaterelated hazards and natural disasters in all countries" while integrating "climate change measures into national policies, strategies and planning" (Goal 13, SDG, 2015). The Agenda clearly points toward the creation of social protection systems that allow all people to enjoy basic standards of living.

The 2018 annual flagship report, The State of Food *Security and Nutrition in the World (SOFI)*⁶ recommends more integration across institutional sectors as well as the use of social protection to address these challenges (FAO 2018).

There are major challenges. These include competing national priorities, challenges of awareness and capacity, financial resources, institutional barriers, biophysical limits to ecosystem adaptation and social and cultural factors (ODI 2014).

A lack of full awareness of the importance of planning for adaptation to climate change can result in climate action being not considered a political priority in many countries. This is especially the case when there are other competing humanitarian priorities and lack of necessary funds, institutional capacities and experience. Overcoming these difficulties as soon as possible is essential in order to protect those most vulnerable to the impacts of climate change.

This paper seeks to complement the Study on Shock Responsive Social Protection Systems in LAC (Beazley et al. 2019) but does not focus on the issues addressed there – to generate evidence and inform practice for improved emergency preparedness and response and more flexible national social protection systems in LAC. Instead, it provides those elements that are more distinctively related to climate change adaptation.

Whilst the paper focuses on LAC, the different concepts as well as the instruments presented below apply more broadly to other regions where WFP operates. Specific decisions of what instruments to use in each country will always remain contextually dependent.

Following this short introduction, the next section briefly reviews the different theoretical frameworks developed to analyse the linkages between social protection and climate change adaptation, including those related to resilience. This is followed by a description of some of the climate-related activities that could be linked to social protection programming and implementation to support adaptation. The final section presents the design considerations for specific social protection instruments so that they can better support climate change adaptation.

https://unfccc.int/

https://sustainabledevelopment.un.org/post2015/transformingourworld

https://data.unicef.org/resources/sofi-2018/

1.1 Climate change in the social protection literature

Until a few years ago, little cross-fertilisation had been observed between social protection, climate change adaptation and disaster risk management communities. Specialists sat in their silos, either ignoring or being unaware of their commonalities and overlapping agendas or unable to overcome institutional constraints or poor communication that prevented them from working together (Arnall et al. 2010).

The adaptive social protection framework (ASP) (Davies et al. 2009), which was developed at the Institute of Development Studies with the support of the World Bank and the UK Department for International Development (DFID), was the first scholarly effort to explore the linkages among social protection, disaster risk reduction and climate change adaptation. The framework aims to "simultaneously tackle unsafe living conditions, counter

the underlying causes of vulnerability, and promote people's ability to adapt to a changing climate" (Arnall et al. 2010:1).

The ASP framework seeks to accommodate social protection interventions that aim to support development and reduce vulnerability to climate change. It works on the understanding of the interlinked nature of the shocks and stresses that poor people face today - and the potential synergies to be gained from a multi-disciplinary approach.

Focus should be on the potential synergies between the economic functions of social protection (protection, prevention, promotion) and its social functions (transformation). This perspective highlights "the potential of certain social protection measures to contribute to growth and productivity as well as to risk management and/or social equity, either through achieving both objectives simultaneously or through linkages with other interventions" (Sabates-Wheeler and Devereux 2007:27).

SP category	SP instruments	Adaptation and DRR benefits	
Provision coping strategies)	social service provisionbasic social transfers (food/cash)pension schemespublic works programmes	- protection of those most vulnerable to climate risks, with low levels of adaptive capacity	
Preventive coping strategies)	social transferslivelihood diversificationweather-indexed crop insurance	- prevents damaging coping strategies as a result of risks to weather-dependent livelihoods	
Promotive (building adaptive capacity)	 social transfers access to credit asset transfers/protection starter packs (drought/flood-resistant) access to common property resources public works programmes 	 promotes resilience through livelihood diversification and security to withstand climate- related shocks promotes opportunities arising from climate change 	
Transformative (building adaptive capacity)	promotion of minority rightsanti-discrimination campaignssocial funds	- transforms social relations to combat discrimination underlying social and political vulnerability	

Further thinking has focused on how resilience can complement the ASP framework in order to achieve a more dynamic approach that integrates different scales and types of hazards. Resilience is in vogue, a conceptual umbrella at the centre of different frameworks and

strategies facilitating integrated approaches that breaks disciplinary silos. It features in the Sendai Framework of Disaster Risk Reduction, the Sustainable Development Goals, the Paris Agreement on Climate Change and the World Humanitarian Summit 2016. Different communities

of practice are learning that "multiple risks, shocks and stresses and their impacts on ecosystems and vulnerable people [need] to be considered together in the context of development programming" (Mitchell and Harris 2012:6).

Béné et al. (2012) have developed the 3P&T-3D analytical framework which links resilience with social protection. The authors provide an innovative analytical framework to evaluate the extent to which social protection programmes contribute to strengthening the resilience of their recipients to climate change and other disasters. This moves from earlier simplified approaches to a more systematic framework that highlights the importance of a dynamic approach to resilience and social protection which considers time and scale issues. A few other

frameworks have been developed linking resilience and social protection. These vary in terms of which resilience capacities to include and what emphasis to give to climate change adaptation and to disaster risk reduction (see Béné et al. 2013, Solórzano 2016; Ulrich and Slater 2016).

The term "adaptive" has been understood differently by some social protection policy makers and practitioners and a few new frameworks have also emerged (see Box 2). These have begun to crystallise around two interrelated and complementary approaches focused on building household resilience to climate change and/or disasters and increasing the responsiveness of programming by adapting systems to shocks (WB 2018).

- 2010 Adaptive Social Protection- Arnall et al. 2010- IDS; WB; DFID
- 2012 3P&T 3D Analytical Framework- Béné et al. 2012
- 2013 Climate-Responsive Social Protection- WB- Kuriakose et al. 2013
- 2015 Shock-responsive social protection- OPM, ODI, DFID- O'Brien et al. 2018
- 2016 BRACED resilience 3P framework- ODI, DFID- Ulrich and Slater 2016
- 2016 WB Adaptive Social Protection Programme in the Sahel
- 2016 Shock-responsive social protection in Latin America and the Caribbean-WFP & OPM- Beazley et al. 2016
- 2017 Adaptive Service Delivery Systems-WB
- 2018 WB Adaptive Social Protection
- 2018 3D Resilience Framework-Béné et al. 2018

This think piece uses a **climate change adaptation** lens. It considers the distinctive impact of climate change (by contrast with other disasters and shocks) on social protection programming. It does not present a definitive new framework but, rather, a vision or approach to understand how social protection can support households coming to terms with climate change.

The starting point is that given the uncertainty around climate change, social protection represents a key form of low regrets⁷ investment (Kuriakose et al. 2013), where it balances the dual role of supporting poverty alleviation, while also addressing vulnerability to climate change.

The study draws on the three resilience capacities presented in WFP's Policy on Building Resilience for Food Security and Nutrition (WFP 2015), the resilience capacities on the 3D resilience framework by Béné et al. (2018) (absorptive, adaptive and transformative capacities) with specific focus on adaptation (see Table 1). The rationale is that social protection should improve or support households' adaptation to climate change. The study presents linkages with key climate change activities that can foster adaptation. We also present some design implications for specific social protection instruments to support adaptation.

When it comes to climate change adaptation low-regret options include adaptive measures with relatively low associated costs and potentially large benefits under anticipated future climate conditions.

Table 1: Benefits of Social Protection to Climate Change Resilience					
Resilience capacities	cities Potential resilience outcomes through social protection				
	Smoothing consumption during lean seasons and during disasters Enabling post-disaster recovery of sustainable livelihoods				
	Rehabilitating the protective functions of natural landscapes				
Absorptive Capacity	Protecting community assets Reducing exposure to floods, drought and sea-level rise/storm surges				
	Protecting incomes				
	Protecting crops				
	Promoting income opportunities arising from climate change				
	Integrating and developing local skills and knowledge related to hazards and the environment				
Adaptive Capacity	Diversifying people's livelihoods and strengthening subsistence activities				
Adaptive capacity	Facilitating mobility and livelihood transitions when required				
	Protecting from asset-degrading and maladaptive coping strategies as a result of shocks and stresses				
Transformative capacity	Creating government systems that are strong and sustainable in the long- term, while leveraging wider change and supporting adaptation at scale				

Source: author based on Davies et al. 2009; Wallis and Buckle 2016; Asian Development Bank 2018; Béné et al. 2018

1.2 Key principles for social protection in the context of climate change

In this paper, we propose ten principles for social protection designers to consider:

- **Recognise uncertainty.** Social protection needs to consider the changing nature of shocks and stress and future vulnerability of households and livelihoods due to climate change.
- II. Prioritise food security and nutrition considerations. Nutrition is a necessary input for resilience-building as climate change threatens the food security of individuals and already poor and deprived households. To be most effective, nutrition and social protection programmes should adopt a comprehensive approach that tackles both immediate and longer-term needs.
- III. Support households' long-term adaptation strategies. Social protection has an emphasis on supporting livelihoods and helping households to adapt to climate change, rather than simply reinforcing shock response. This can be achieved through such activities as the support of livelihood diversification and livelihood opportunities arising from climate change through the promotion of

local skills and knowledge, behavioural change and mobility and livelihood transitions.

- IV. Avoid maladaptation. Social protection assessment, planning and design should integrate actions to avoid the risk of maladaptation,8 — understood as the household and livelihood strategies that foster coping capacity in the short-term but insidiously affect long-term vulnerability or the adaptive capacity of households.
- V. Understand trade-offs. Policy makers should consider trade-offs between the different resilience capacities supported by social protection. For example, a conditional cash transfer or public works programme targeting households in regions exposed to protracted climatic shocks such as droughts can increase absorptive capacity through the provision of post-shock income support. However, there is a risk of creating an incentive for households to remain in areas with poor long-term environmental prospects, when temporary migration, or even relocation, is a better adaptive strategy. Such a programme might thus support shock-response, but not adaptation (see Box 3).
- VI. Define resilience objectives. Integrating resilience objectives into the theory of change of programmes can increase the contributions of social protection to climate change adaptation.

According to Magnan (2014:1), "urgent efforts are needed to support socio-ecological systems threatened by climate change, but how to make adaptation happen on the ground remains vague. Consequently, there is a real risk that climate funding may support initiatives that are actually harmful for the socioecological systems, i.e. which foster adaptation in the short-term but insidiously affect systems' long-term vulnerability and/or adaptive capacity to climate change. This generally defines the term maladaptation".

- VII. Improve the environment. Social protection planning and implementation should take into consideration any unintended spillover effects on the environment and aim for more environmentally friendly actions.
- VIII. Adjust programmes to context. There is no onesize-fits-all social protection programme or strategy that will meet the adaptation needs of all households and communities. Interventions need to be tailored to specific needs and vulnerability contexts.
- IX. Acknowledge even small contributions. Even small impacts on adaptation from individual interventions are considered relevant as long as they follow the principles presented here.
- X. Work across disciplines. Linking social protection with climate change activities and tools is crucial for a stronger impact on resilience. This is explained in the next section.

This attention to the temporal characteristics of climate impacts is particularly important for those areas facing dramatic changes to the physical environment, so that governments can avoid propping up declining livelihoods and regions.

In places where desertification has taken over farmland or where melting permafrost has changed rangeland ecology, livelihoods may be changed permanently – beyond the scope of any adaptation strategy. In such settings, the greatest risks will be borne by those least able to cope and may be magnified by other maladaptive policies, such as policy attempts to stem migration (Black et al., 2011).

Planners of social protection should consider if they are creating incentives for households to persevere with old livelihood strategies which are no longer viable. They need to consider also the counter-case. They need to ask themselves: is the support policy in fact promoting the long-term dependence of vulnerable households in irreversibly degraded environments?

Thus migration can be seen as a form of adaptation but it may require public support to reduce its inherent inequity. Support for relocation (including, skills training appropriate to the new region) might be judged a better option than support for traditional livelihoods threatened by climate change.

People often move into places with high economic opportunity coupled with high environmental vulnerability, such as low-lying coastal cities or steep hillsides. Therefore, climate-responsive planners need to take into account the increased propensity of people to migrate in the face of climate change, and plan for growing urban populations of vulnerable and socially excluded migrant groups.

Source: Kuriakose et al. (2013):27

Linkages with climate change activities and tools are crucial for a stronger impact on adaptation (Solórzano 2016; Ulrich and Slater 2016; Béné et al. 2014; 2018).

The benefits of integrating climate and disaster risk considerations into social protection planning and design are multiple. This helps prevent poor and vulnerable households from falling deeper into poverty, reduces their overall exposure to risk and contributes to long-term resilience to climate change (Kuriakose et al. 2013).

Initial analysis of 124 programmes in Asia showed that the inclusion of a combination of different social protection, disaster risk management and climate change adaptation objectives in an integrated programme is more likely to foster the adoption of longer-term adaptive interventions as opposed to short-term responsive measures which tend to not have an integration of activities (Davies et al. 2013).

Where social protection systems and programmes are collaborative and integrated to provide a comprehensive set of tools that address vulnerability to shocks, they foster people's adaptive and transformative capacities. Thus social protection can form part of the overall adaptation response, alongside interventions in other sectors (ibid.).

Shifting from reactive coping strategies to longer-term adaptive responses is crucial to support transformative change (Bahadur et al. 2015). Transformation can be achieved when activities are used at a greater scale or in integrated combinations with catalytic effects, for example through legal reform.

In the next section we present some of the climaterelated activities that could be linked to social protection programming and implementation. Following this, we present the design considerations for specific social protection instruments so that they can better support climate change adaptation and resilience.

Linkages with climate-related activities

Linkages with climate change activities such as climate information and analysis, targeting, early warning, forecast-based financing and social behaviour change are essential. There is a need for explicit provision of access to disaster risk management and climate change adaptation activities and tools alongside social protection. These activities can be linked to social protection programmes and systems. This is not an exhaustive list but a first attempt at identifying entry points for social protection to support climate change resilience. This does not mean that standalone programmes do not have potential in adaptation and resilience, especially if certain design considerations are borne in mind.

2.1 Climate information and analysis

Climate change is likely to lead to changing patterns and new vulnerability hotspots. Social protection in response to climate change and disaster risk needs to be carefully designed to ensure that it serves a long-term function, and not only in relation to the current climate scenario (WB 2013).

Understanding how households' assets and livelihood strategies will be affected by climate change is critical. Rural livelihoods in particular are very vulnerable to changes in weather patterns, posing serious challenges to their subsistence.

Given how the specific effects of climate change are difficult to predict, social protection practitioners must learn to plan for uncertainty.

Policy makers should consider both the potential direct and indirect impacts of climate change, plan for higher frequency and severity of disasters and build in feedback loops with early warning systems for social protection systems (Kuriakose et al. 2013).

Climate models can assess current and future climate variability, enabling a better understanding of current and projected vulnerabilities (Ovadiya and Costella 2013). In particular, climate information can inform the design of social protection (Winder Rossi et al. 2017):

 Use observations and models to assess current and future climate variability in the region so as to understand the robustness of the system to shocks, identify extremes and their frequencies and potential pressures on social protection systems.

- · Provide an understanding of the range of potential futures that can be used to stress test different social protection options and ensure these are viable across a range of possible scenarios and that they avoid maladaptation.
- · Strengthen social protection targeting and monitoring systems.
- · Strengthen early warning systems and seasonal forecasting to enable these to be coupled with social protection systems and programmes.

Climatic projections have been beneficial in estimating future impacts of climate on a diversity of study areas. When discussing the impacts of extreme weather events on social protection programmes that utilise food procurement it is important to analyse all the steps between production and consumption (Mesquita and Bursztyn 2017).

Climate projections can help understand the longer-term changes that can affect food security and malnutrition. They are thus more useful for policy development, whilst other methodological approaches can help identify specific groups at immediate risk, focusing efforts on initiatives that will support their adaptation. A report by WFP (2017) on work undertaken to understand the impacts of climate change on food security has noted that mainstreaming climate analysis methodologies, whilst focusing on partnerships, coordination and the links between policy and programmatic work, is key to developing appropriate methodologies.

WFP's Consolidated Livelihoods Exercise for Analysing Resilience (CLEAR) analysis9 seeks to build stakeholder capacity to undertake resilience analyses. It is a methodology that has been developed to better understand how food security is affected by climate risks whether they be related to extreme events (such as droughts, floods and cyclones), or to long-term gradual changes (such as shifting rainfall patterns, rising temperatures or salinity intrusions in coastal areas due to sea level rise). The aim is to inform the design and targeting of programmes and policies related to climate change adaptation by exploring how both current and future climate risks affect the most vulnerable.

https://www.weadapt.org/knowledge-base/vulnerability/the-clear-approach

Another example is the incorporation of climate-change projections into the Fill the Nutrient Gap (FNG) analysis.¹⁰ Within the High-End Climate Impacts and Extremes initiative (HELIX)¹¹ WFP has assessed how climate change could affect the affordability and availability of a nutritious diet, based on different adaptation pathways at specific warming levels of land and coastal resources.

Using these methodologies WFP could support a better understanding of different policy and planning processes, including social protection programmes and also improve capacities of national social protection systems to better address the impacts of climate change on food security and nutrition.

Climate information and models can also ensure social protection programmes avoid supporting interventions that create behaviours which are maladaptive in the longer term. Providing social protection programmes to vulnerable communities could provide incentives for the most vulnerable to remain in locations where, according to current projections, it will be unviable for them to withstand climate effects in 20-30 years' time. When policy-makers decide to maintain households in regions where old livelihood strategies are no longer viable, they need to consider if the support policy is in fact promoting the long-term dependence of vulnerable households on irreversibly degraded environments.

Interventions can be stress-tested against a range of future climate scenarios and principles under which social protection has been shown to increase climate resilience in other regions (IIED 2013). It should be noted, however, that very few programmes have data on climate resilience outcomes or even indicators on climate vulnerability/ resilience (see Box 4).

Thinking about social protection and climate change may help to extend the time horizon for which interventions are designed, thus helping find longer-term solutions to the impacts of disasters, as well as assisting governments to consider factors underpinning vulnerability to climate change and prepare for the long-term impacts. Ongoing work on shock-responsive social protection provides an entry point for WFP to help integrate long-term concerns and explore ways to incorporate climate change adaptation elements into social protection systems.

WFP can help to define the rationale for a climate-related intervention, outline the strategic approach and select appropriate tools to achieve the intervention's goals.

Through WFP's innovative work on climate resilience, cutting edge tools from climate science and finance can be incorporated into social protection programmes.

WFP can also support country-specific climate risk analyses in order to assist governments to develop realistic planning scenarios and formulate risk mitigation and adaptation programmes focused upon food-insecure and vulnerable populations. This work, alongside expertise in disaster risk reduction, enables WFP to significantly support climate policy dialogue. It also means working with governments to ensure these initiatives can be incorporated into national systems (WFP 2018).

Fill the Nutrient gap analysis seeks to strengthen nutrition situation analysis (by focus on barriers to dietary intake, linked to decision-making) while forging consensus on cost-effective policy and programmatic strategies to improve nutrition of key target groups.

The High-End Climate Impacts and Extremes initiative (HELIX) is a multi-disciplinary research consortium assessing the long-term impacts of extreme climate change, including food security, health, water security, energy security, ecosystems and human migration. HELIX brings together 16 organisations which use climate information for planning. These include national meteorological agencies, universities and research institutes, as well as stakeholders such as WFP.

The WFP Three-Pronged Approach-3PA

The aim is to strengthen the design, planning and implementation of programmes in resilience building, safety nets, disaster-risk reduction and preparedness. This approach provides a deeper understanding of the local context and livelihoods, as well as gender awareness. It builds the foundation for multi-sectorial and complementary programmes with potential to support social protection programming and implementation. It is comprised of three processes:

- · Integrated Context Analysis (ICA) at the national level is a collaborative tool used to identify the most appropriate programmatic strategies in specific geographical areas between the government and its partners, based on areas of convergence of historical trends of food security, natural shocks and land degradation
- Seasonal Livelihood Programming (SLP) at the sub-national level is a consultative process that brings together communities, government and partners to design multi-year, multisectoral operational plans using seasonal and gender lenses.
- Community-Based Participatory Planning (CBPP) at the local level is a bottom-up tool that ensures communities have a strong voice and leadership lead in setting priorities. It is used to develop multisectoral plans tailored to local priorities, ensuring prioritisation and ownership by communities.

Nicaragua (Crisis Module for the Nicaraguan Labour Force Survey)

With the support of the Rapid Social Response Fund, Nicaragua is integrating a crisis module in it permanent labour force survey to provide frequent indicators of climate and other shocks to households. This programme builds on current government efforts to collect data on its labour force, while also taking advantage of its coverage of both rural and urban population as well as its frequency in collecting information on household shocks and crises.

Mali (Adaptive Social Protection for Resilience)

The Adaptive Social Protection for Resilience links social protection to disaster risk reduction and climate change. Among other goals, the programme aims to strengthen the existing early warning system to develop specific tools to better anticipate the occurrence and impact of natural hazards. Through mapping of high-risk areas and determining the characteristics of the population, the programme also identifies triggers to scale up interventions, thus providing adequate response in case of disasters.

Jamaica, (Jamaica Social Protection Strategy)

This integrates climate change information on social protection programming by:

- designing monitoring and evaluation systems to capture further evidence and feedback on the effectiveness of an adaptive social protection approach;
- combining the long-term study of poverty impacts and social responses to climate change with trends and projections of future climate hazards;
- developing climate risk assessments for use in conjunction with social protection programme design and implementation;
- develop early warning and response systems, especially in the areas of food security, livelihood protection and physical security.

Source: Planning Institute of Jamaica 2014; World Bank 2017; WFP 2017a

2.2 Climate information and targeting

Standard social protection programmes usually target groups as fixed categories. However, this may not necessarily be the best way to identify climate change vulnerability. For vulnerability and resilience are not shaped by a single identity, and some identities will be less relevant than others in determining vulnerability to disasters and climate change, depending on power

relations. Different types of data and information are required to analyse the situation, assess needs and define eligibility criteria for targeting.

Vulnerability reduction and resilience-building need to take historical, social, cultural and political contexts into account and have the potential to assist policies and practices in being more equitable and inclusive, helping prevent vulnerable and marginalised individuals and groups from being left behind (Chaplin et al. 2019).

Social protection planning could consider identifying the reasons why some people are more at risk and how their social identities influence their vulnerabilities. A vulnerability assessment can be valuable for understanding differing vulnerabilities and capacities and informing effective and responsive programmes that aim to build resilience. When social protection is not well designed from a gender or broader social inclusion perspective programmes risk creating new, or exacerbating existing, vulnerabilities. These could include increased time burdens on women, or interhousehold violence (Holmes 2019).

The analysis can be carried out as a component of poverty and risk assessments, including a communitylevel analysis of disaster and climate vulnerability (Chaplin et al. 2019) (See 3PA approach in Box 4). Assessments could follow an intersectional approach¹² and include data on poverty, ethnicity, gender and age that can help reveal power dynamics and negotiation within the household and the community, as well as barriers to adaptation and transformation. It should be noted that "an intersectional approach should not attempt to include as many analytical categories as possible or list all the factors that may determine vulnerability, but it should widen the perspective and reflect upon what factors may be relevant" (ibid.:14).

Conducting a thorough gender and inclusion assessment including a specific gender- risk assessment in advance of targeting (Holmes 2019), could be included in the intersectoral approach.

The ability of social protection programmes to specifically target households vulnerable to climate change and natural hazards depends on the availability of this information. This can be achieved by sharing data based on jointly agreed data needs among different climate change adaptation, social protection and disaster risk reduction institutions so as to facilitate processes and avoid duplication. Mixed approaches using quantitative and qualitative data could also help.

Small tweaks to the type of data collected could also help to have a broader picture of the vulnerability context. For instance, Proxy Means Tests (PMTs) are one of the most common ways of social protection targeting¹³ but the method has been criticised as "not appropriate for measuring rapid changes in welfare due to sudden shocks and may be less relevant tools for identifying households in need of transitory support" (Kuriakose et al. 2013:28). One way to remedy this would be to select correlates of households with transitory needs, such as

participation in climate vulnerable livelihoods including fishing, herding or agricultural labour, to identify transitory need. A recent study by the World Bank in Niger found that the PMT performs better at identifying the chronic poor and the household economy approach is better at identifying households suffering from seasonal food insecurity. However, it also highlights that they both rely largely on the same type of household level information (Schnitzer, 2016 in Barca and Beazley 2019). As a result, small tweaks to the type of data collected can make it possible to estimate not only households in chronic poverty but also those vulnerable to shocks (Barca and Beazley 2019).

There is some evidence in the targeting literature (in particular on migrants/refugees) that complex targeting systems can be replaced by objective demographic indicators which are more cost effective. For example, family size and housing are the best predictors of poverty for Syrian refugees in Jordan the poverty rate almost doubles if the size of the family goes from one to two members and increases by 17 percent from one to two children. Families renting or owning property and living in an apartment or house made of concrete with piped water or a proper latrine are less poor (Verme et al. 2016).

A vulnerability analysis has to be regularly updated,

because disaster and climate change data will change over time, possibly requiring adjustments in targeting over the life of a programme. Area- and householdlevel data on exposure to natural hazards are needed to distinguish transitory from chronic poverty in places where crises are likely to occur (World Bank 2013). This can be a challenging task, as many programmes in developing countries do not have most of the required information available, and when it is, sometimes it is out of date or contains large errors (Cornelius et al. 2018).

2.3 Climate information and early warning

When combined with risk analysis and forecast, climate information may allow for selection of operational areas for social protection. This is based on an analysis of climate risks that considers needs for both long-term support and additional scale-up. This information may also allow for dynamic prioritisation of early action and response operations (Kuriakose et al. 2013).

Making an accurate assessment of impact on a population before an event can be complex as multiple factors will affect a community's resilience

¹² Intersectionality is a framework for conceptualising a person, group of people or social problem as affected by a number of discriminations and disadvantages. It takes into account people's overlapping identities and experiences in order to understand the complexity of prejudices they face.

^{13.} PMT is a methodology to describe a situation where information on household or individual characteristics correlated with welfare levels is used in a formal algorithm to proxy household income, welfare or need.

to shocks. Typical factors include poverty, livelihoods, location, infrastructure, timing, preparedness systems and overall community resilience (Maher et al. 2018). Collecting disaggregated data that considers different types of vulnerabilities is crucial.

Better collection and use of disaggregated data is essential, both for understanding intersecting inequalities and for targeting interventions that build resilience for all. "The disaggregation of data must be strengthened and go beyond the gathering of sex, disability, geography and age data towards supporting analysis of more complex intersecting dimensions of vulnerability and make visible those people who are most marginalised in specific contexts" (Chaplin et al., 2019:21).

Especially for predictable crises, early warning systems (EWS) can help to build resilience by responding to crises before they occur. Early action systems are designed to trigger anticipatory action prior to an emergency to mitigate impacts and increase resilience to shocks. At country level, this means the development of indicators with clear thresholds and triggers, early warning monitoring systems, the predevelopment of early action plans and the

establishment of funding mechanisms that can be rapidly released to implement early action initiatives. Using and linking EWS with existing social protection schemes can enhance their impact in protecting livelihoods of at-risk populations and thus mitigate anticipated shock impacts (Winder Rossi et al. 2017).

Figure 1 provides an example for drought in Kenya and the trigger vegetation condition index for the scalability of the Hungry Safety Net Programme (HSNP).¹⁴This has allowed the HSNP to become an innovative disaster risk management tool that increases the preparedness and capacity of institutions at national level to respond. It has put in place an action plan (including objectively determined index-based triggers) with targeting and delivery mechanisms in advance of an emergency. The tool reduces the risk of delayed relief operations, which tended to start after the crisis had already unfolded because of the chain of lengthy bureaucratic processes in declaring emergencies and deciding response actions (Ulrich and Slater 2016). Similarly, the Index of Vulnerability to Climatic Shocks (IVACC) in the Dominican Republic¹⁵ can support early action in the face of an emergency.

Figure 1: Framework for HSNP scalability 2016							
Location	Trigger Vegetation Condition Index (VCI)		Drought Phase Equivalent	Maximum coverage of households to receive CT	Amount of Transfer	Frequency	Duration of Transfer
	≥ 50 and 35 to 50	Wet or No Drought	1 Normal	Routine HSNP households	Standard payment	Every 2 months	On-going
	20 to 35	Moderate drought	2 Alert	Routine HSNP households	Standard payment	Every 2 months	On-going
	10 to 20		3 Alarm	Routine HSNP households	Standard payment	Every 2 months	On-going
SUB- COUNTY		Severe Drought		Households beyond routine, up to 50% coverage in each sub-location	Emergency payment	Every month	For each month VCI is at severe drought status
	< 10 Extreme Drought			Routine HSNP households	Standard payment	Every 2 months	On-going
		4 Emergency	Households beyond routine, up to 75% coverage in each sub-location	Emergency payment	Every month	For each month VCI is at extreme drought status	

The Hunger Safety Net Programme implements a scaled up, integrated, effective government-led and financed safety net programme to support some of the most vulnerable and poor households in Northern Kenya.

Índice de Vulnerabilidad ante Choques Climáticos

2.4 Forecast-based Financing

Forecast based Financing (FbF) is a financial mechanism whereby humanitarian funding is released to take anticipatory, pre-defined action after a forecast is issued and before a hazard event strikes.

If properly linked with national social protection systems, FbF has the potential to not only help smooth climaterelated shocks, avoiding set-backs in development, but also to enable poor and vulnerable people to manage climate risks more effectively and in a proactive manner (Coughlan de Perez et al., 2015). This includes connecting the social protection system with predictable finance that allows it to become more self-sustaining in the long-term.

FbF has been showing interesting results in effectively linking financial mechanisms with EWS, moving the caseload of emergency intervention in the direction of long-term and predictable support (Winder Rossi et al. 2017). It consists of three key elements that enable early action:

- 1. a set of pre-agreed triggers (or danger levels)
- 2. pre-defined actions to be taken when those triggers are met
- 3. a financing mechanism to automatically fund them actions (RCCC and GRC 2017).

WFP through the Food Security Climate Resilience Facility (FoodSECuRE)¹⁶ uses climate forecasts to trigger anticipatory action at community level before climate shocks occur. During the 2015/16 El Niño in Guatemala, FoodSECuRE with the Ministry of Agriculture used FbF for community-level resilience activities. The project involved the implementation of soil and water conservation structures, building rain water harvesting structures for

irrigation, provision of drought resistant seeds as well as training of leading farmers on soil, water and agroforestry activities to improve farm land quality and crop production. These actions aim at reducing the impact of drought and better preparing for the next planting season.

When linked to social protection programmes it can help to anticipate the needs of target beneficiaries with respect to predictable natural hazards. This facilitates vertical and horizontal expansion mechanisms in advance of a shock (Winder Rossi et al. 2017). This could also help to increase the timeliness of interventions.

Conceptual frameworks for linking FbF with social protection are beginning to evolve. According to Costella et al. (2017) there are two potential was of linking these two instruments: one is to integrate a social protection structure or programme into a system-wide FbF mechanism. An example of this approach is the Contingency Emergency Response Component (CERC) in Jamaica. The second approach is to integrate FbF mechanisms into an existing social protection system, triggering support to existing or new beneficiaries. In this case, new and additional funding could be allocated and disbursed through a social protection system to core or new beneficiaries (see This information can also support adaptive capacity. For instance, if an increase of rain is forecasted then distributing extra seeds could support a bumper harvest (Smith 2016 in Costella et al. 2017). If an FbF mechanism is built as part of the structure of the social protection system, it would be important that the triggers and the actions are consistent with government contingency plans (ibid.).

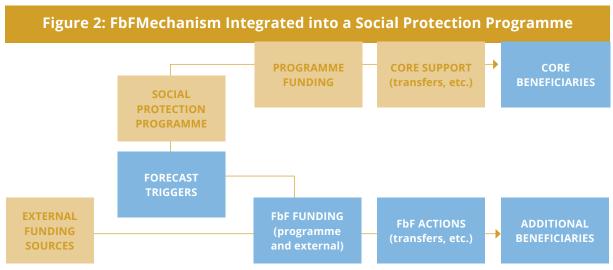
The World Bank is currently implementing a Disaster Vulnerability Reduction Project (DVRP), which includes a Contingency Emergency Response Component (CERC) to facilitate triggering of existing mechanisms for damage assessment and cash transfer provision to households affected by a disaster. The CERC builds on the country's experience during previous disaster events and provides options to use the conditional cash transfer PATH programme delivery system and the central warehouse of the Ministry of Labour and Social Security (MLSS) to provide support to affected households.

The CERC facilitates the provision of cash transfers to different categories of affected households by:

- 1. One-time cash transfer to priority affected households in affected geographic areas.
- 2. A supplemental cash transfer to PATH households in the event of a large-scale disaster with national impact, thus permitting rapid disbursement of cash to the poorest households.

The identification of PATH households is based on geographic information provided by an initial situation overview. The DVRP also supports the development of a National Risk Information Platform whereby all the risk data can be located and updated in a centralised platform accessible to government agencies. The allocation of funds to the CERC component is triggered if a large-scale disaster has occurred at a national scale which has caused or is likely to cause widespread adverse economic and social impact of a severity such that the country's national resources cannot adequately address the situation.

Source: (Barrantes, n.d.)



Source: Costella et al. 2017

2.5 Climate risk insurance for poor households

Climate risk insurance could play an important protection and promotion role for households **exposed to climate risk.** Index-based insurance is designed to trigger compensation in the event of a weather-related shock based on a parameter that has been previously defined. That is, payments are not triggered by actual loss, but on the basis of a trigger, such as rainfall measured at a local weather station. Indemnity or market-based insurance, where pay-outs are based on actual losses, is another option.

The security afforded by insurance could enable people to take smarter risks and boost their productivity, building pathways to prosperity. People living in poverty tend to opt for lower risk – but also lower-return - activities. Additionally, many smallholder farmers may not qualify for a loan due to insufficient income and assets. Having insurance could be the difference that enables a subsistence farmer to access finance for the first time to invest in higher-productivity inputs or tools. With the security that insurance provides, farmers are in a better position to make riskier but more profitable investments in, for example, new crop varieties that allow them to build a more secure future for their families (DFID 2013). It is important to note, however, that farmers could invest in new crops and technologies that while improving income in the short-term could have unintended long-term impacts on local ecosystems and/ or societal economic health. Thus, it is crucial to consider the uses and investments carried out in order to avoid maladaptation.

Index-based insurance can allow farmers to feel more confident because they know that the pay-out will protect them if their crops fail due to extreme weather (DFID 2013). However, there are important pre-requisites to ensure robust index-based insurance:

- the insurance should pay out (and pay sufficiently) when farmers have had a loss
- pay-outs must come quickly enough and at the right time;
- they should be distributed equitably within households and do not have negative gender impacts
- the opportunity cost of the premium payment should not be so high as to actually not be economically rational for the poorest.

It has been argued that micro-insurance should only target those that have an ability to pay some, or all, of the insurance premium, while individuals with very little income/assets, should be targeted by government social protection. Those with some capacity to pay could contribute to the premium, but with support from government. Those with more capacity to pay are able to use micro-insurance as a purely market-based mechanism without any government support. Thus, social protection and micro-insurance have slightly different target populations (with a small amount of overlap). Literature has shown that for the very poorest paying into insurance premiums is not as beneficial as using any available finance (e.g. savings) for meeting more basic needs (Le Quesne et al. 2017).

Climate risk insurance should be part of a comprehensive package of social protection tools.

In combination, social protection and insurance can protect people from different types of shocks and levels of vulnerability (Weingartner et al. 2019). For example, index-based climate micro-insurance can be offered to poor farmers who are engaged in conditional cash

transfers, public works programmes and productivityenhancing safety nets. Beneficiaries can use their labour to pay for the premiums, which can be in addition to, or instead of, receiving cash or in-kind support.

In Ethiopia, through the WFP-supported R4 Rural Resilience Initiative¹⁷ poor farmers can buy the insurance by working additional days on the PSNP programme. More prosperous farmers pay their premiums in cash. With market-based traditional climate insurance (where pay-outs are based on damages), these systems do not work as the premium has to be financed by a financial body. The R4 programme is an example of a programme sitting between a safety net system and a fully marketbased unsubsidised insurance programme. Poor farmers are able to be a part of a market-based insurance scheme only when an outside party contributes to the premium. For example, in the R4 Ethiopia programme the donor finances the premiums. This is a way of using insurance to build the resilience of the most vulnerable, but there are questions on the scalability of such programmes which depend heavily on subsidies.

It is important to note that without subsidies there are questions around the sustainability of such programmes. However, the aim is to target a segment of the population that cannot otherwise completely participate in a marketbased solution but where this type of intervention means that the cost burden is able to be shared by the beneficiary, rather than completely by the social protection system. That is, micro-insurance will need to operate at a higher level than safety nets, targeting those with the capacity to pay a premium and with assets to protect.

Insurance should thus not be implemented as a stand-alone scheme for the most vulnerable, but as a tool for large, infrequent, shocks, supplementing savings (and loans) which act as a buffer for smaller, more frequent, shocks. Climate insurance markets will be more effective when they are designed to complement and build upon well-functioning and well-targeted social protection schemes. The security provided by the insurance, combined with regular cash transfers and other forms of asset protection against climate-related impacts, might further create an enabling environment for prudent risk-taking by poor households and increase their adaptive capacity (World Bank 2013).

Resilience measures can be incorporated into the design of the insurance. This could be by providing incentives such as lower premiums for undertaking activities such as tree planting or using drought resistant seeds. Risk-based pricing, which underlies market-based

insurance schemes, incentivises risk reduction because it ties the cost of the premium to the cost of the risk. However, there are risks of unequitable distribution when carrying this out. The poor often face the highest risks and they should not be charged the highest premiums. Moreover, many vulnerable or chronically poor groups, such as the young, elderly and ill, are unable to offer their labour

Designed in an appropriate manner, social protection can help to improve access to climate risk insurance to the poor. It can influence the design of insurance schemes to ensure they are pro-poor. This is where the R4 programme sits. It takes recipients of a social protection programme and aims to 'graduate' them into partial premium payment of a market-based microinsurance scheme.18

Due to the difficulty in predicting the impacts that a catastrophic event might have on low-income households, much of the work focusing on financial inclusion and resilience examines welfare impacts of financial products in the absence of impacts. They have furthermore rarely been designed with a specific focus on climate change response, so there is innovation to be developed in this area. This should be in areas that will reduce the cost of insurance for the poorest, increase its take-up and create new credit mechanisms that can promote investment in risk-mitigation technologies, and digital solutions for social network creation and public response to shocks (Moore et al. 2019).

Insurance schemes must be designed in a way that ensures inclusive pro-poor outcomes as well as considering the viability and sustainability from an insurer's perspective. Clear governance rules and transparency are needed ensure the latter does not conflict with the former. Few insurance schemes that benefit the poor have been started and sustained without publicly-funded premium support. In some LAC countries, agricultural insurance is heavily subsidised, like the CADENA programme in Mexico, which provides farmers with free state-level insurance against drought (see Box 6). Governments and their donors should be prepared to provide long-term support to reach the poorest people that the private sector alone will not. To be truly transformative, insurance initiatives must empower marginalised people, including women and the landless. It may, for example, provide them with access to resources, such as credit, that they did not have before (Results 2016).

https://www.wfp.org/r4-rural-resilience-initiative

For more information on the R4 Rural Resilience Initiative, the R4 model, and achievements in Ethiopia, visit: https://www1.wfp.org/publications/2018-r4rural-resilience-initiative-annual-report

Box 6 - The CADENA programme in Mexico

The Mexican Componente de Atencion a los Disastres Naturales (CADENA) is an index-based insurance social protection programme. It has two objectives: (i) to provide direct financial support to low-income farmers with no access to a formal insurance market who are affected by disasters, in order to compensate their losses and boost their production cycles and (ii) to boost agricultural catastrophe risk transfer to specialised national and international insurance markets through the purchase of insurance, in order to reduce the impact of disasters on public finances.

CADENA has a unique institutional arrangement, because the purchase of the insurance and the payment of the premium is done by the local state governments that negotiate directly with public and private insurance companies at the beginning of the fiscal year. The Federal Government subsidises between 80-90 percent of the premium, on the basis of the degree of vulnerability of particular states to catastrophes. State governments cover the remaining 10-20 percent. The insurance purchased by state governments is index-based and it is linked to rainfall and other hydro-meteorological parameters at a defined weather station during an agreed time period. The parameters of the contract are set so as to correlate, as accurately as possible, with the loss of a specific crop type. The pay-out to recover losses and damages is triggered automatically when the levels of the weather measurement (e.g. cumulative millimetres of rainfall), are above or below the previously set parameters and indices. All eligible farmers within the affected area, receive the pay-outs (unconditional cash transfers), thus eliminating the need for in-field assessment.

Source: Winder Rossi et al. 2017

CADENA is an exception to the rule as most micro-insurance programmes in Latin America have been developed and led by the insurance sector. Designing insurance schemes that target vulnerable people can be difficult because social protection schemes and market based micro-insurance schemes are typically being developed and implemented in parallel and do not consider or take advantage of how they can be complementary.

Thus, while market-based schemes are very well suited to improving the resilience of households that can afford the premiums, they are unlikely to be accessed by the poorest and therefore may not contribute to poverty reduction among poorer households. Literature on the role of insurance in building resilience to shocks among the poorest suggests that it should be offered within an integrated climate risk management strategy and broader adaptation efforts, such as early warning, awareness-raising programmes, provision of disaster-proof infrastructure and investment in more sustainable livelihoods.

It is also important to acknowledge that risk transfer should not be a substitute for risk reduction. Risk reduction should be prioritised, focusing on the root causes of risk in conjunction with the management of the manifestations of that risk. Risk transfer is one element within a wider planning strategy to build resilience to climate change (Le Quesne et al. 2017). Where it is applied without adequate risk reduction, insurance can convey a feeling of security while actually leaving people excessively exposed to impacts (Mitchell 2013).

Moreover, as with certain asset creation programmes, insurance can create incentives to live and work in

hazardous regions and sectors. This may exacerbate vulnerability over the long-term (Heltberg et al. 2009).

Most climate change adaptation and risk reduction measures require that people modify existing behaviours or adopt new ones related to health, agriculture, natural resource management, infrastructure and settlement patterns. While good scientific data and technical information are important, they are often insufficient for people to take adaptive action. Values, beliefs, attitudes, preferences, habits, costs and benefits assessments, social norms, policies and institutions interact to influence behaviours, including maladaptation.

Social Behavioural Change and Communication interventions (SBCC) can employ a range of strategies. These can include interpersonal communication, advocacy, social mobilisation and structural or environmental interventions at individual, household or community levels. These can empower, motivate and strengthen the capability of target groups to improve their livelihoods, adapt to climate variability and change and increase overall resilience (USAID 2019).

A SBCC strategy could be included in social protection programmes in order to support beneficiaries' behavioural change towards adaptation, considering the different enabling factors and the barriers for climate change adaptation. This can be in the form of communication campaigns, dissemination of information, training and advocacy.

A successful SBCC strategy must be complemented with other elements, in order to make changes in behaviour practical for individuals, households and communities.

When deployed in conjunction with approaches used to inform climate resilience-building efforts, such as climate change information and vulnerability assessments, SBCC approaches can strengthen and sustain adaptation interventions (USAID 2019).

It is also very important to communicate information about such aspects as programme eligibility criteria and targeting procedures so as to reduce the risk of increased tensions and conflict within households and communities. Mechanisms designed to promote voice, rights and justice values are to be embedded in programming. In giving more voice to programme beneficiaries, and more rights to participate, claim and complain, a change dynamic is incorporated into social protection design. Some argue this may empower the poor and foster collective identity and action (Molyneux et al. 2016).

It is important to stress that institutional and policy reform that complements SBCC to achieve major behavioural change is crucial to support transformative change. This includes enforcement of legislation that deters behaviours which are maladaptive in the longer term (for example, legislation to avoid the concentration of people and economic assets within a certain distance of the coastline) or one which incentivises adaptive behaviour (Bahadur et al. 2015).

2.5 Promoting institutional coordination

At the centre of this approach is ensuring coordination and collaboration between climate change, disaster risk management and social protection areas. However, it is important to recognise the differences of approaches, methods and objectives in order to focus on the potential complementarity of these sectors.

The main barriers to greater integration of social protection, climate change adaptation and disaster risk management may vary from country to country. Generally, however, it is lack of capacity, coordination between agencies, awareness and political will which are the main impediments to better integration.

Addressing the institutional barriers for better integration is crucial. Ensuring complementarity, instead of system overloading, is an important first step. Other technical factors such as the lack of mutual knowledge among sectors regarding vulnerability, risks and other elements should be addressed (Barrantes n.d.).

WFP can then engage in the provision of technical assistance and policy support, as well as facilitate dialogue among different institutions and partners to support more integrated programmes. Given that this is an emerging area, a priority is to raise awareness. Informal workshops, field visits, and regional South-South tours and dialogue are likely also to be useful. Emphasis should be on increasing knowledge through provision of specific examples.

Social protection and climate change actors should work together in developing common strategies to work towards common goals for addressing social vulnerability to climate change. Together they could identify actors' key strengths and how their activities fit into wider and longer- term objectives across the development and humanitarian nexus. The creation of common tools for climate analysis, assessment and evaluation would also help to build synergies into existing procedures, guidance and standards for social protection. Information systems that collect information and data on production, productivity and challenges can support coordination.

This is also relevant for other actors such as the private sector, donors and civil society organisations that have traditionally operated as separate technical disciplines, focused on different sets of risks and target groups. Within government they have usually reported to different and uncoordinated line ministries. Frequently there are coordination challenges within and between representatives at different levels of public authority, at regional, national, subnational and community levels (Béné et al. 2018). It is primarily local institutions which mediate how households are affected by and respond to climate change and climate shocks (Kuriakose et al. 2013).

Strengthening inter-institutional coordination and the establishment of strategic alliances with local, national and international actors is key to clarify functions and responsibilities. This is one of the main challenges for the establishment of social protection systems that focus on the complementarity of functions and the synergy of inter-institutional actions and where strengths are not lost by either combining or aligning them.

The establishment of memorandums of understanding and prior agreements between relevant actors facilitates inter-institutional dialogue and strengthening of an integral resilience strategy. This could be enhanced via commitment to the institutionalisation of social protection based on clear rules and practical protocols and inter-institutional dialogues allowing voices for all relevant actors.

Social protection requires a strong legislative framework which clearly articulates the roles of different actors through policies, laws and regulations consistently across sectors. Strategies and policies need to be complementary in the description of roles and mandates, in order to avoid fragmentation of responsibilities. Explicitly reflecting resilience-enhancing initiatives into policy, strategies and frameworks is essential.

Broader laws and regulations, particularly those that govern finance and insurance, matter for social protection. For they will shape other elements of the institutional frameworks that affect the implementation of successful approaches, such as data use and financing.

Engaging with the private sector can also provide opportunities. This could involve climate information services where private sector telecom companies can help deliver information to populations. Similarly, the insurance sector can provide varying insurance products, such as micro-insurance that can be fostered through communication and collaboration between the private sector, public sector and international institutions such as WFP.

Intra-government coordination: Mexico

The National Climate Change System is a public policy mechanism that coordinates synergies between all the federal ministries and institutions in relation to climate change. This includes the Intersecretarial Climate Change Commission (CICC) which coordinates the climate change actions of the Ministries of Finance, Environment and Natural Resources, Economy, Agriculture, Health and Development amongst others. A key element of the CICC is focus on ensuring integration of public policies in all national and state administrations. There is also an aim to minimize vulnerability of society and productive sectors, increasing their resilience and the resistance of strategic infrastructure.

In Anguilla, the National Social Protection Policy aims at "better integrating social protection into climate change adaptation planning and programming, disaster preparedness and response, and meeting our obligations as climate change affects the lives of those we serve." (Government of Anguilla 2018:3)

Regional coordination:

In Latin America, governments' adaptation policies have been strengthened by participation in international networks. For example, the Ibero-American Programme on Adaptation to Climate Change (PIACC), developed by the Ibero-American Network of Climate Change Offices (RIOCC), is an example of a Latin American intergovernmental initiative. In Central America the Central American Integration System (SICA)²⁰ is promoting greater intersectoral engagement It has developed the Regional Intersectoral Agenda on Social Protection and Productive Inclusion with Equity (ARIPSIP)²¹, a strategic instrument that seeks to create synergies and intersectoral strategies to strengthen regional social protection and productive inclusion schemes.

Implications for social protection instruments to support adaptation

There is very little evidence of social protection programmes supporting adaptation to climate change. This is because very little explicit programming has taken place so far that has considered this as an objective. Current empirical evidence mainly focuses on the direct or indirect impacts on resilience of standard social protection programmes. In the few examples available it is premature to assess the impacts of the interventions on long-term adaptation. For instance, the World Bank Adaptive Social Protection Programme in the Sahel is still in pilot implementation, therefore there is not yet evidence of its actual contribution to enhancing resilience. "Whether or not the Adaptive

Social Protection programme is effectively successful at strengthening the resilience capacities of the beneficiaries of the programme in the Sahel would still have to be determined" (Béné et al. 2018:13).

Some experience in stand-alone social protection provision provides a good entry point from which to support climate change adaptation and resilience. This does not mean that new climate change adaptation programmes should not be moulded by the country or regional context. They can potentially seek funding via the Green Climate Fund, Adaptation Fund or other instruments.

- Sistema de la Integración Centroamericana
- Agenda Regional Intersectorial sobre Protección Social e Inclusión Productiva con Equidad

3.1 Social transfers

Social transfers can include both cash and in-kind transfers. We give emphasis to this type of social protection programme because the literature has identified this as one of the areas with more scope for progress and further research into its potential in resilience-enhancing capacities. Also, regional examples focus on these types of programmes.²²

They can be effective tools to support people's access to food, through in-kind or cash transfers. This could lead to higher consumption of better-quality food, despite impacts of climate change.

Cash transfers can support the anticipation of risk, which enhances adaptive capacity of households (Solórzano 2016). Cash can be accumulated as savings and as a self-insurance mechanism which can then be drawn upon and liquidated at times of crisis (Corbett

1988). However, social transfers require several design considerations such as predictability, flexibility, value and duration in order to support adaptive capacity.

Predictability

The regularity and predictability of cash support provides poor households with a level of basic income security and stability from which they can start investing current consumption into future consumption. Poor households can then start anticipating risk, which increases their adaptive capacity in the face of future shocks (Davies et al. 2009; Jones et al. 2010).

The fact that households know that they will receive the cash can support their adaptation strategies and enable them to plan ahead of a shock. Evidence from the Prospera programme has shown how the transfer help beneficiaries to deal with the bad times and it increased their credit-worthiness from local shops (Solórzano 2016:137). The predictability of the transfer in this case increases the adaptive capacity of households. In other words, cash transfers can then be accumulated as savings and as a self-insurance mechanism which can then be drawn upon and liquidated at times of crisis. In contrast, in Guatemala the delivery of the conditional cash transfer Bono Seguro was quite irregular due to delays in the budget release. On some occasions the total number of transfers disbursed to beneficiaries had to be reduced (Solórzano 2017). This limits the potential for enhancing adaptive capacity as households cannot plan in advance for the use of the transfer.

In contrast, one-off emergency assistance is usually not predictable and therefore does not provide recipients

with the capacity to be better prepared for shocks. For "it simply allows them to absorb shocks better if an adequate amount (relative to their needs) is received on time" (Ulrichs and Slater 2016:16).

There is also some evidence that adequate timing of benefits can enable the achievement of specific outcomes. For example, benefits could be usefully tied to households' seasonal needs - such as specific periods in the agricultural production cycle or lean season (Barca 2018).

In contrast, if the timing is not appropriate social protection can restrict some autonomous adaptation strategies. This involves the "adjustments that populations take in response to current or predicted change" (Nelson et al. 2007:397). For example, the timing of employment required by public work programmes may coincide with temporal migration or seasonal work developed as a coping or adaptive strategy. This also applies to in-kind transfers.

Flexibility

Social protection should be flexible about recipients' **use of the transfer.** It should not obstruct the autonomous adaptation strategies that households might be developing. It should also facilitate the participation of those most vulnerable.

This implies that cash would not be restricted to certain types of expenditures or vendors and beneficiaries do not need to meet conditions. This flexibility means that a single cash transfer might address a range of needs and potentially achieve multiple programme objectives.

Unrestricted cash transfers allow beneficiaries a wider and more dignified choice of assistance, based on their preferences and it empowers vulnerable groups. It can be a vital contribution to making affected people the prime agents of response (ECHO 2015). Evidence from Greece and Afghanistan show how unrestricted cash is usually spent according to a hierarchy of needs. Most immediate needs come first (food, basic shelter, primary or emergency health care) and then other needs such as investments in livelihoods, secondary and tertiary health care or less essential goods (Harvey and Pavanello 2018).

Value and Duration

Larger size transfers for a long duration will have a stronger impact on resilience. Usually the value and duration of the transfers is too small to contribute to livelihoods transformation, since the aim is to either cover food security concerns or health and education

Most LAC countries provide cash transfers for the poor. In the Caribbean, the Dominican Republic, Antigua and Barbuda, Dominica, Haiti, St. Kitts and Nevis, St Lucia and St. Vincent and the Grenadines- In Latin America, Guatemala, Honduras, El Salvador, Belize, Costa Rica, Mexico; Colombia, Ecuador, Venezuela, Peru, Uruguay, Chile, Argentina, Brazil and Paraguay).

expenses only and not to invest in stronger and more productive livelihoods. A common critique of public works programmes is that they sometimes set remuneration at such a low level (below minimum income levels) that they are "rarely sufficient to enable significant investment in anything other than survivalist microenterprise or the accumulation of small household assets" (Beazley et al. 2016:1). However, given budget constraints this is might be challenging to finance. Therefore, the government has a trade-off between coverage, size of transfer and duration of the transfer. The balance has to be carefully assessed by the government in terms of its cost-effectiveness.

There appear to be indications that more frequent transfers favour consumption smoothing and spending on smaller assets. Conversely, less frequent lump-sum payments can be associated with increased productive investment (Haushofer and Shapiro, 2013; Beazley and Farhat, 2016; Bastagli et al, 2016 in Barca 2018).

The value of any cash transfer response should assess carefully any potential implications for intra and inter-household relations. In emergency contexts, intra-household tensions are likely to be heightened for numerous reasons. These may include increased pressure on household economies and/or changes in roles and opportunities, such as men's loss of livelihoods. Evidence suggests that there is particular concern that higher values of transfers targeted to women may contribute to, or exacerbate, abuse or violence in the household (Buller et al., 2018). This means that the value and duration of the transfers should consider the intra-household effects and strategies to mitigate the negative effects (for example, smaller but more frequent transfers, developing a safety or safeguarding strategy and protocol) (Wasilkowska, 2012; Holmes 2019).

In the case of in-kind transfers, these should cover nutritional needs. Food assistance involves a complex understanding of people's long-term nutritional needs and the diverse approaches required to meet them.

This involves the distribution of a selection of foods chosen to prevent malnutrition and meet the energy needs of beneficiaries. Food can be provided to everyone in a geographic area or a camp (a blanket distribution) or provided to specific individuals or groups considered particularly vulnerable (a targeted distribution).

In the case of in-kind emergency transfers this can be short term with a phase-out strategy that allows it to be discontinued as soon as communities re-establish self-reliance or can be helped through other interventions.

Conditionalities

An explicit focus on human capital accumulation is incorporated into a wide variety of cash transfers in different ways, including through conditionalities that require children to attend school and health checks. The LAC region was the first to include conditional cash transfers that required children to attend school and health checks. These have resulted in improvements in children's nutritional levels and child attendance at school and health clinics (Fiszbein and Schady 2009). Conditionalities can also be linked to in- kind transfers.

It has been argued that the response within the LAC region to the 2009 financial crisis was distinctive due to its existing social protection systems which allowed governments to scale up existing programmes rather than creating new ones (see Grosh 2014 and Robalino et al. 2012). These programmes have also been scaled up in response to disasters, although it remains as an emerging practice.²³

There is very little evidence about the impact on the adaptive capacity of households. For this is not an explicit objective of these programmes. In Nicaragua, the CCT programme Red de Protección Social helped beneficiary households cope in the aftermath of the coffee crisis in Central America and supported coffee labourers to intensify alternative agricultural activities before the crisis (Hallegatte 2016). Evidence also shows that beneficiaries of Bolsa Familia in Brazil used the cash transfer to diversify their income portfolio, supporting adaptive capacity (Alcaraz 2017).

Potentially, conditional cash transfers that aim to break the intergenerational transmission of poverty by investing in the human capital of children can enable new opportunities by providing them with the required skills for accessing formal, and more secure, labour. Qualitative evidence from the Prospera programme in Mexico in contexts of increased climate risk (Solórzano 2016) show children in general have experienced social mobility to livelihoods that are less climate sensitive. Several drivers underpinned this mobility, including the access to education of quality, to markets and to high-skilled jobs as well as support from other transfers such as school grants.

Conditional cash transfers can lead to a 'human capital trap' in contexts of insufficient employment creation, high discrimination and unequal power relations. Young adults with increased human capital cannot access market-based livelihoods given poor macroeconomic performance and restrictions on access to the labour market. They depend on informal working arrangements with very low productivity which in certain contexts may represent new risks and increased

[.] See Beazley et al. 2016 and 2019 for examples of conditional cash transfers expansions in the region.

vulnerability (including illegal migration). These young adults have fewer capabilities to work in traditional livelihoods, which provided some source of resilience, due to the emphasis of conditional cash transfers on increasing formal urban work skills (Solórzano 2016). An upfront and clear recognition of this context should be central to the development paradigm that underpins conditional cash transfers.

Other conditional cash transfers, such as Bolsa Família, emphasise redistribution and, as a consequence, conditionalities are 'soft' and are considered a reinforcement of social rights to food, health and education (Britto 2008). These programmes are usually more flexible in terms of the use of the transfer.

Conditionalities can limit the flexibility needed to support climate change resilience. For instance, conditionalities on participation in work or other activities required by the programme can have indirect effects on some of the livelihood strategies that households adopt to adapt to uncertainty. Evidence from the Prospera programme in Mexico shows that the conditionalities of the programme related to women's attendance at compulsory information sessions were actually interfering with their autonomous adaptation strategies (Solórzano 2016).

When well designed, conditionalities can support SBCC for climate change adaptation. For instance, explicit environmental objectives can be included in social protection programmes through training, advocacy, communication and education. This can provide incentives toward choosing sustainable practices, taking into account beneficiaries' opportunity costs (Ziegler 2016).

Incentives provided to compliant beneficiaries should always be positive. They should leave beneficiaries better off than they would otherwise be. For instance, environmental conditional cash transfers (CCTs) aim to provide incentives to those who farm and fish as they transition from unsustainable practices (such as poor agricultural practices on steeply sloping lands or overfishing) to sustainable practices (such as agroforestry or sustainable fishing). They are typically faced with a temporary loss of income during that period. These CCTs are different from typical payment for environmental services (PES) schemes in that they only provide temporary support (ibid.). Other programmes that have included environmental objectives are public work programmes.

The LAC region presents some interesting examples of CCTs linked to environmental services:

• Environmental CCTs: PROEZA, Paraguay The The Poverty, Reforestation, Energy and Climate Change Project (PROEZA)²⁴, co-funded by the Green Climate Fund (GCF), the Government of Paraguay and the UN Food and Agriculture Organisation (FAO), is a CCT that links the social protection programme Tekoporã to environmental services. It has a joint climate change mitigation and adaptation approach for the integral and sustainable management of forests and landscapes in accordance with social objectives. It will introduce environmental incentive payments to the recipients of the conditional cash transfer programme Tekoporã for the successful establishment and care of the agroforestry production systems promoted by the project. This is accompanied by technical and legal advice on how to invest the money in improving land tenure and bioenergy use (i.e. through improved cooking stoves).

To complement this and promote a holistic landscape approach to ensure climate change resilience in target areas, PROEZA aims to promote the entry of small and medium land owners into the regional bioenergy market. To achieve this, concessional credit with national resources will be provided to private land owners in the project area to promote the establishment of 24,000 ha of New Generation Forest Plantations (NGFPs). This will include more than 4,800 ha of riparian protection forests to protect watercourses (Green Climate Fund 2017).

• CCTs and PES hybrid: Bolsa Floresta, Brazil

Bolsa Floresta (BFP) is a hybrid of a CCT and payment for environmental services (PES) which remunerates families that carry out environmentally sustainable productive activities. It involves a mix of direct cash reward and community-based investments in incomegenerating activities, social empowerment and capacity building and social infrastructure.

The programme successfully combines multiple streams of funding from the public and private sectors to make transfers at household and community level to conserve forests and improve people's wellbeing in sustainable development reserves in Amazonas. In order to join the programme, riverine participants should not deforest pristine forest, should send their children to school and have lived in the area for at least two years. An important lesson of the BFP is that using a simple message as a reference for the scheme (`standing forest') acts as a common denominator and improves the coherence of the programme. This helps to pool the resources of scheme investors into a single budget with a common objective. This in turn helps to avoid duplication of efforts, double counting and reduces the risk of negative spill-overs (Porras and Asquith 2018).

3.2 Home-Grown **School Feeding**

Home-grown school feeding programmes (HGSF) link school feeding programmes with local smallholder farmers to provide schoolchildren with local and nutritious food. These increase access and consumption of quality food for students and free up resources that can improve food security for their families. This contributes to reduce school-drop-out rates and improves their adult job prospects by increasing children's human capital.

The schools provide local farmers with a predictable outlet for their products, leading to a stable income, more investments and higher productivity. The programme can also create access to predictable markets and livelihood opportunities for small holder farmers in the same communities. Thus, many of those benefits also have influence on the adaptive capacity of rural populations (Mesquita and Bursztyn 2017).

At the community level, HGSF initiatives promote nutrition education and better eating habits, and encourage diversification of production with a special emphasis on local crops. Community involvement, in turn, enhances the sustainability of programmes.

A HGSF programme can also choose to promote agricultural practices that are more environmentally friendly.

HGSF has the potential to have a positive influence on water and land use, biodiversity and climate change adaptation It can support forms of agricultural production that ensure environmental sustainability. A range of approaches have been followed to achieve this, including national registries of agroecological producers, such as Brazil's, organic certification and criteria for environmentally sustainable food (FAO and WFP 2018).

These programmes could start by assessing the production of organic, agroecological or sustainable food by local smallholder farmers, including adherence to any certification or other quality assurance schemes. This is used in discussions with local smallholders and schools about which schemes could work for them and which support they would need to implement such schemes (ibid.).

School feeding can provide a platform for delivering other services and reaching schoolchildren, promoting knowledge and innovations and strengthening capacities of households and communities. They thus help advance successful outcomes for climate change adaptation.

Schools could also serve as community-changing energy hubs, because they are critical pieces of existing infrastructure that are naturally placed near population centres and already serve as gathering points for educational, civic and commercial activities. Currently, WFP is exploring the possibility of linking school feeding programmes to sustainable energy projects that introduce modern energy solutions to children, parents and their communities via schools. This has the potential to support small-scale farmers to transition from subsistence agriculture into entrepreneurial activities for improved incomes.

The requirements for school feeding to support adaptation are:

- Support the production of organic, agroecological or sustainable food
- Education services should be of quality
- Production of organic, agroecological or sustainable food by local smallholder farmers
- SBCC must be relevant to local needs, climate information and livelihood context.

3.3 Asset accumulation programmes (through livestock investments)²⁵

Although not as prominent in Latin America and the Caribbean, programmes aimed at asset accumulation in the form of livestock aim to address deficits in productive assets which underpin poverty (Barrientos et al. 2014).

These interventions use livestock to try to build the assets of the poor. Many of these are based on "heifer-in-trust" of "pass the gift" models, where after receiving a breeding animal a recipient is expected to return an agreed

Not to be confused with Food Assistance for Assets (FFA) programmes. In this study, asset accumulation programmes are understood as programmes implemented by national governments and that focus on livestock investments.

number of offspring to the project which can then be given to other recipients (Kim and Sumberg 2014). In sub-Saharan Africa these programmes include government initiatives on a national scale such as Girinka (One Cow per Family) in Rwanda, as well as numerous local projects by government, NGOs and others such as the Send a Cow initiative in Kenya, Uganda and Ethiopia. Evidence has showed that these programmes improve food security and boost income among the poorest. However, in terms of climate change, there is a trade-off in these types of programmes, as there is a high carbon 'hoofprint' of livestock production, specifically methane produced by animals.

Recent studies have proposed different options for improving livestock feeding, as a means of boosting production of meat and milk and reducing GHG emissions intensity at the same time. Grasses have climate-friendly qualities, preventing soil erosion and storing more carbon in their deeper root structure thus preventing the release of nitrous oxide, another potent greenhouse gas, from soils. Varieties bred specifically for Rwanda and other countries are also more resilient to local pests and diseases. By working with both public and private sector partners, researchers aim to make seeds available to farmers, so they can improve their income and boost food security but without a cost to the environment (Paul et al. 2018).

The requirements for asset accumulation programmes through livestock investments to increase adaptive capacity are:

- · Incorporation of resilience-building measures into the benefits and services package such as training in alternative livelihoods, climate resilient or by providing material needs to develop livelihoods suited for changing climatic conditions.
- Transforming rural livelihoods along with protecting and adapting to changing climate conditions through the creation of employment options in agricultural value chains; increasing access to rural non-farm income.
- Consideration of spill-over effects in the environment and any potential maladaptation incentives.
- Access to accurate weather information.
- Functioning markets are in place to allow for the purchase of inputs and/or marketing.

3.4 Public works programmes

Public works programmes are considered safety-nets as they provide cash transfers to vulnerable, food-insecure and/or crisis-affected households in return for the provision of labour (particularly through labour-intensive construction and rehabilitation projects). The main objective focuses on addressing household consumption shortfalls (whether crisis- or livelihood-related) and constructing works that add value to local economies, although the emphasis may change at different periods of stress/crisis.

The rationale underpinning these programmes is to address both short-term and chronic poverty and improve the asset base, thus helping to alleviate poverty in the medium and long terms. Programmes may have different emphases at different points along the development-humanitarian continuum.

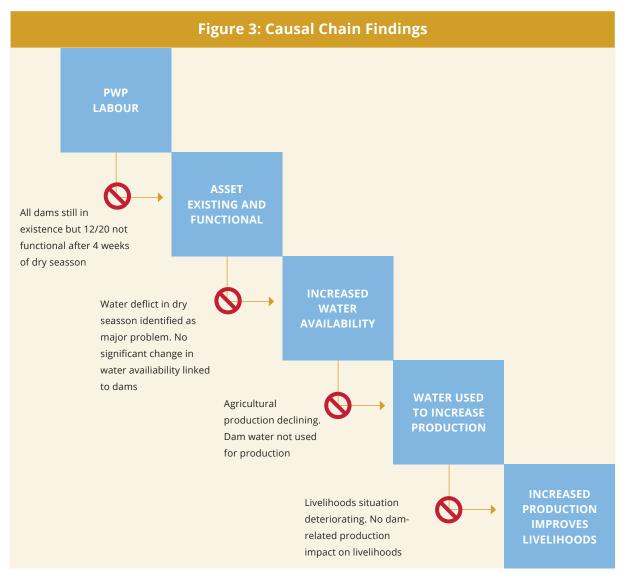
The social protection literature highlights the potential role of public works programmes in the adaptive capacity mainly through the creation of assets. These can increase resilience to future shocks, either by enabling livelihood diversification and adaptation or by better protecting from the shock itself (see Figure 3).

Infrastructure investments contribute to longer-term development objectives by reducing a community's

vulnerability to climate over the longer term and foster adaptation. Common project types include:

- environmental conservation and rehabilitation interventions such as soil and water conservation through tree/mangrove planting, or construction of bunds, area catchments, or fenced enclosures
- improving soil and water management, for example by improving water delivery or de-silting irrigation channels, especially in drought-prone areas)
- disaster-proofing physical infrastructure, for example by strengthening embankments, buildings, roads, bridges, or gullies that can resist flash flooding
- constructing community-based disaster risk-reduction assets, such as storm shelters (Kuriakose et al. 2013).

In terms of the public works programmes that are aimed at environmental rehabilitation or conservation of natural resources, there is little evidence regarding the actual impact of assets created (McCord 2013; Ludi et al. 2016). The actual benefits are widely assumed rather than empirically assessed (McCord et al. 2016). The following diagram shows the causal chain theory of public works programmes vis a vis the actual empirical findings of a study in Kenya.



Source: Ludi et al. (2016) The diagram shows that the public works programmes in Kenya did not have significant impacts on natural resource availability or livelihoods in the medium term, therefore challenging the attribution of livelihood benefits to the public works programmes (McCord et al. 2016).

For this model to succeed, public works programmes need to ensure a coherent theory of change. This should be aligned with climate change adaptation and disaster risk reduction and identify where community assets address key challenges to livelihoods to have longer-term impacts, rather than being just temporary safety nets (McCord et al. 2016).

If public works programmes are provided on a one-off or irregular basis, for which people will eventually cease to be eligible, the impact on both poverty and vulnerability reduction is quite limited. The transfer size, targeting, scalability, quality of assets, consideration of local context and synergies with other interventions will also influence the potential impact on resilience (ibid.).

As with conditional cash transfers, participation in public works can sometimes interfere with autonomous adaptation strategies, especially those developed by women. In general, the gendered impact of public works programmes is mixed and they are often criticised for depriving women and men of time that could have been invested in more productive endeavours. Such programmes should be flexible enough to allow for the activities of the public works to be complementary to the activities already being developed by the beneficiaries (see Box 10.)

Over decades of implementation, WFP has developed several tools, practices and tools to support the design and implementation of the Food Assistance for Assets (FFA) programmes. These have evolved from the previous

The Productive Safety Net Programme (PSNP) in Ethiopia is made up of a number of components including:

- · Labour intensive public works for chronically poor and vulnerable households who are able to work (80 percent of normal caseload of beneficiaries);
- Direct support (in cash and/or food transfers) to chronically poor and vulnerable households with labour constraints (about 20 percent of the normal caseload of beneficiaries)
- A complementary Household Assets Building Programme (HABP) that combines technical assistance, business planning and credit provision to beneficiary households for income generation.

Resilience outcomes (Newton 2016; Barca 2018):

- Results from the impact evaluation of Knippenberg and Hoddinott (2017) suggest that the PSNP has significantly mitigated the impact of drought, reducing vulnerability and increasing resilience. The average transfer was found to mitigate the post-shock drop in welfare by 57 per cent allowing for an almost total recovery within two years rather than four. A case study of PSNP conducted by the Overseas Development Institute (ODI) as part of the BRACED initiative²⁶ (Ulrichs and Slater 2017) notes that evidence of the impacts of the programme on people's resilience to climate-related shocks remains patchy. However, there is evidence that absorptive capacity was improved through the cash transfers which helped reduce food insecurity and increase resilience in the face of drought. Anticipatory capacity was strengthened – 1) at beneficiary level through linkages with micro-finance institutions through the HABP which has increased access to savings and loans for beneficiaries; and 2) at systems level through the contingency funds and risk financing mechanism. Enhanced adaptive capacity was somewhat harder to discern.
- The design allowed public works programmes to cultivate private land held by female-headed households in response to social norms that restrict ploughing by women. However, some of the heavy physical labour requirements for infrastructure were not always sensitive to the different capacities of men and women.

Food or Cash for Work projects toward more integrated resilience-building programmes grounded in a comprehensive context analysis that can support government programmes, including Public Works Programmes.

Incorporating climate change adaptation into existing WFP food assistance programmes is a way to focus on the quality of response and ensure lasting food security for beneficiaries and should be done with the aim of avoiding maladaptation. WFP's resilience work such as the PRO-ACT initiative in Central America²⁷ (a response to the El Niño phenomenon in the Dry Corridor), is also an example of expertise that can be linked and provided to national social protection programmes and systems. The latter is supported by the Three-Pronged Approach to Resilience Building (3PA), which can be used to inform many other safety net programmes.28

The requirements for public works programmes to increase adaptation are:

- Physical assets construction must take a holistic view of the environment.
- · It should also be relevant to local needs and livelihoods, designed, located and constructed in line with
- · Adequate technical inputs must be ensured during design, implementation and maintenance.
- Community ownership and management of the asset must be ensured.
- Follow-up maintenance must take place to ensure ongoing functionality.
- Access to asset benefits must be equitable; and the functionality and usage of the asset must be monitored.
- Ensuring time taken to adhere to building assets does not add to women's time burdens.
- Providing opportunities for women to take on community leadership roles or expand their networks through group meetings.

Source: adapted from Beazley et al. 2016; 2019, Barca 2018; Solórzano 2016

- 26. Building Resilience and Adaptation to Climate Extremes and Disasters
- See https://www.wfp.org/publications/pro-act-el-nino-response-dry-corridor-central-america-2016-2018 for more information on PROACT.
 See https://www.wfp.org/publications/2017-three-pronged-approach-3pa-factsheet for a factsheet on the 3PA.

3.5 Integrated social protection programmes

Cash plus programmes are those "those which combine cash transfers with one or more types of complementary support which can consist of components that are provided as integral elements of the cash transfer intervention, and components that are external to the intervention but offer explicit linkages into services provided by other sectors" (Roelen et al. 2017:9).

These programmes combine elements that can be beneficial for resilience. For example:

- Cash transfers can support absorptive capacity by providing relief and recovery after shocks but also by anticipation of risk, which enhances adaptive capacity of households. Existing routine social protection programmes can help as entry points for adaptation and resilience enhancement.
- Productive investments and financial inclusion. Linking cash transfers with interventions aimed at financial accumulation improves the productivity of households. This can foster adaptive capacity by strengthening livelihoods through productivity and innovation.

Integrated programmes aim at boosting the livelihoods and productive capacities of vulnerable households through the temporary provision of a flexible and integrated combination of cash transfers and productive assets, activities and inputs, and/ or technical training and financial services. They pay attention to deficits in income or consumption but also aim to address deficits in productive assets. The intention is that eventually beneficiaries achieve a level of well-being that exceeds the eligibility threshold for the programme and thus they exit such programmes. The BRAC programme in Bangladesh has become a flagship graduation programme to lift people out of extreme poverty. The model transfers a package of assistance which includes regular cash transfers for two years, access to savings, productive assets, livelihood training and behaviour change communication (see Box 12).

In terms of climate change, these programmes could support adaptation through the promotion of incomegenerating activities and livelihood diversification.

These may develop resilience in the face of threats, which promote opportunities and strategies to deal with future risks (Davies et al. 2009; Jones et al. 2010). This is achieved through integration of different programmes to build an integrated approach to livelihood improvement in a sustainable way.

By improving the productivity of households, social protection can potentially support the diversification and strengthening of livelihoods, which can foster adaptive capacity (Davies et al. 2009; Heltberg et al. 2009; Niño-Zarazúa et al. 2012). "Broadening and strengthening the asset and livelihood portfolios of households and communities in advance of shocks builds climate resilience" (Kuriakose et al. 2013:26).

Activities related to these programmes can in some cases have unintended spillover effects on the environment. In Ethiopia participation in the livelihood support component of the Productive Safety Net Programme (see Box 10) may be linked to a striking increase in off-farm income from natural resource collection. This might be among the unintended effects of social protection programmes. For the "programme may be perpetuating dependence on activities that can aggravate environmental problems such as deforestation and land degradation, thus undermining longer-term agricultural productivity" (Weldegebriel and Prowse 2013:51).

Transforming productive livelihoods along with protecting and adapting to changing climate conditions is key (ibid.). These activities can support adaptive capacity because they provide sustainable economic opportunities in the context of environmental change. This can be pursed through initiatives that aim to raise rural incomes through the creation of employment options in agricultural value chains and increase access to rural non-farm income (de Janvry 2010). They provide support for innovatory activities that households are already developing. At the same time, these measures will help to increase people's resilience. This can be achieved, for example, by linking subsistence farming to markets, as well as by increasing their access to productive inputs, financial services including credit, land rights, irrigation systems and increasing their capabilities to achieve productive rural livelihoods in a sustainable way (Solórzano 2016).

These programmes can also include financial

inclusion. They can play a key role in supporting vulnerable populations in their pathway to become resilient to recurrent shocks and crises. They allow access to specific mechanisms that would effectively enhance the capacity of the rural poor to protect their assets, such as agricultural and weather-based insurance. Approaches complementing regular cash transfers with a combination of skills training on financial education to accelerate livelihoods development have shown encouraging results in enabling extremely poor people to get access to financial services such as loans, savings and insurance schemes. These are offered by both villagebased mutual groups (e.g. village savings and loans associations, rotating savings and credit associations) and formal financial institutions such as microfinance institutions (MFIs), credit unions or community banks) (Barca 2018). For instance, the conditional cash transfers programme Prospera in Mexico had a financial inclusion

add-on, in collaboration with Bansefi bank. The PROJE component provides financial education, credit, savings, life insurance and other additional benefits. Training and business development support for off-farm activities and diversification into other rural enterprises have potential to create viable business alternatives which support resilience (WB 2013).

Founded in Bangladesh in 1972, the Building Resources Across Communities programme (BRAC) has been at the forefront of poverty alleviation in Bangladesh and ten other countries.

How the programme works (BRAC 2019):

- Consumption stipends are provided for a limited period to smooth consumption and enable participants to focus on acquiring new skills and livelihoods.
- Productive asset transfer such as livestock or goods for small trade, to enable participants to kick-start their livelihood. Livelihoods are selected through a thorough market analysis to identity enterprise options suitable to local contexts.
- · Home visits/life skills training. This has been identified as one of the most crucial elements of the approach in building confidence and instilling general life skills with frequent and regular contact.
- Technical skills training provides critical instruction on how to manage a chosen livelihood and develop basic business management skills.
- Health care through linking participants to locally available resources including national health care schemes, community health workers, local doctors and NGO services.
- Savings and financial education mobilises participants in locally relevant savings associations to improve money management and develop a savings discipline.
- Social integration develops strong linkages between participants and the community-at-large.

Randomised control trials reported similarly positive results, not only in terms of graduating out of extreme poverty but on a range of indicators such as asset ownership, food security and financial inclusion. Moreover, most of these gains were sustained one year after programme support ended (Banerjee et al. 2015).

Recent evidence is increasingly confirming the productive role of social protection, alongside increased asset accumulation among beneficiary households. Evaluations across Latin America have shown increases in the ownership of productive assets and inputs, as well as livestock (especially small animals such as chickens, ducks and goats). They have similarly documented changes in productive activities, increased productivity and wider livelihood diversification among beneficiary households (see Barca 2018). In some cases, this has included diversifying people's livelihoods away from climate-sensitive activities such as rainfalldependent subsistence-oriented agriculture (Davies et al, 2013). The link to sustained livelihood security and diversification is dependent on many factors, including access to market, jobs and skills. Findings of current programming show that routine social protection programmes that have been specifically designed to reduce vulnerability to climate-induced food insecurity, such as in Kenya, Bangladesh, Niger and Tajikistan (WB 2011) and Ethiopia (DFID 2011), can foster adaptation by providing a greater range of livelihood choices (DFID 2013).

The theory of change of these programmes is that over time beneficiaries' lives and livelihoods will be "transformed in a sustainable way, allowing them to support themselves so they are able to 'graduate' off external support" (Sabates-Wheeler and Devereux 2011:11). However, these programmes usually are limited in time and scope and households usually exit the programmes after two or three years, not necessarily achieving sustainable graduation, and with an eventual decline of assets and livelihoods For example, the evaluation of the programme Chimen Lavi Miyo in Haiti found a decline in assets after four years of beneficiaries exiting the programme (see Pain et al. 2015). To be resilient, households should be able to withstand shocks and stresses related to climate change, without significant impacts on their livelihoods (Weingartner et al. 2019).

The continuity of other key financial services once households exit the social protection programmes is crucial to the sustainability of these interventions and also to its sustained impact on resilience (ibid.).

There is potential to link beneficiaries who have received social protection payments in functional bank accounts with financial inclusion, in particular accessing loans and credits for households without a prior credit history. However, the evidence of the use of accounts linked to social protection programmes to support financial activities, including for credit and savings, is very low. For equipping people with fully functional bank accounts, as some social protection programmes do, "does not automatically lead to the use of accounts for anything else than receiving cash transfers through social assistance programmes and therefore has limited implications for the depth or quality of financial service provision" (Weingartner et al. 2019:45).

Diversification into livelihoods with very low productivity might trap households in a context of poverty and vulnerability. This is one in which households only manage to cope with shocks and not to increase their productivity. Therefore, these programmes should also provide a means towards stronger livelihoods. This does not mean that people should exit traditional livelihoods which are considered climatesensitive as there is evidence that these livelihoods also provide sources of resilience for households (Solórzano 2016). That said, the potential gains of spreading risk through diversification need to be weighed in relation to the opportunity costs of divesting from high-return activities considering the vulnerability to future climate shocks and stresses (Johnson et al 2013). Social protection should instead support access to livelihood options and innovation, rather than focusing on providing an exit strategy away from traditional livelihoods.

It is also important to mention that whilst these programmes may be highly effective they usually come at a significantly higher cost than stand-alone transfers. They require adequate capacity and coordination among agencies for successful implementation. Long-term sustainability of these programmes is likely to depend on the financial feasibility of governments (Barca 2018).

Public works programmes can also be linked to employment (e.g., through skills training) or access to community and health services (e.g., through existing social assistance programmes, such as health care or nutrition programmes). These 'Public works plus' programmes aim to graduate participants from safety net coverage (Subbarao et al. 2013).

There are some examples of integrated programmes in the LAC region which have potential for resilience support by providing an integrated set of activities that increase the productivity of households. Although these are standard social protection programmes without a specific climate adaptation targets, they still provide an entry point to strengthen resilience by linking them

to training in alternative livelihoods, climate resilient practices and climate-smart agriculture or by providing material needs to develop livelihoods suited for changing climatic conditions.

- Peru's Haku Wiñay²⁹ targets rural households living in extreme poverty. To maximise its efficacy, the intervention is being deployed in the same rural areas where Juntos, the Peruvian conditional cash transfer programme, is being implemented. The project focuses on the development of productive and entrepreneurial skills to help households strengthen their income generation and diversification strategies, as well as to enhance food security. There is training in climate-smart agricultural techniques and alternative crops are emphasised, providing an additional measure of climate resilience. It follows a learningby-doing approach. To develop the capabilities of family farmers, the project transfers assets and facilitates the provision of technical assistance and training, helping beneficiaries to adopt technologies and eventually adapt them to their interests and conditions. Yachachiqs - family farmers who know how to apply the technologies in local lands and who have experience teaching other family farmers - are key to achieving this goal. The programme also provides financial education, involving training and assistance to promote formal savings, especially among those who receive cash transfers from Juntos. To do this, the implementing groups hire financial facilitators who are usually professionals instead of family farmers, as they need to have financial services training experience (Alcaraz 2017).
- Brazil's Programa de Fomento de las Actividades **Productivas Rurales** (Programme of Support for Rural Productive Activities) promotes the expansion of agricultural productivity, diversification, food security, income generation, and inclusion in social policies of smallholder farmers, including from indigenous communities who are in situations of poverty and extreme poverty. It focuses on semi-arid areas where agricultural activities need to be adapted to climatically challenging circumstances, It includes training in alternative productive livelihoods where conditions for agriculture are very limited, and/or provides training in more than one livelihood activity in case conditions change. The programme tailors its livelihoods training programme according to local circumstances. It is adaptive in areas where climatic conditions are changing. The Fomento Programme is part of the Brazil without Poverty Plan.³⁰ It provides technical assistance and rural extension services, as well as conditional cash transfers in support of the agriculture productivity programme. Fomento also provides

^{29.} http://www.foncodes.gob.pe/portal/index.php/proyectos/haku-winay-noa-jayatai

Plan Brasil Sin Miseria

- a strategy for managing household production in the long-term (Alcaraz 2017). The Water for All **Programme**, also part of Plan Brasil Sin Miseria helps to promote food security and productive inclusion of populations in semi-arid regions and regions that suffer prolonged droughts (Porras and Asquith 2018).
- *Ingreso Ético Familiar*, is the continuation of the now discontinued Chile Solidario programme. It provides unconditional and conditional cash transfers to households according to their level of poverty, plus social and work-related support services. Compared to Chile Solidario it places emphasis on households' income-generating capacity to be able to lift themselves and stay out of poverty by their own means. For this reason, apart from the psychosocial support previously offered by Chile Solidario, the law incorporates a new form of employment support (apoyo socio laboral) for those above the age of 18 who are not studying, or whose studies are compatible with their entrance into the programme. The objectives of both psychosocial and labour support to families are to instil self-esteem, generate capabilities and promote actions which, taken together, will reinforce the generation of autonomous income by vulnerable adults once they enter the labour market. The psychosocial assistance seeks to develop capabilities that promote beneficiaries' social inclusion and their self-development. The labour assistance is an innovation that seeks to contribute directly to employability and generation of autonomous income through greater participation in the labour market. Beneficiaries have the possibility of accessing an anticipated exit from the employment support, subject to having demonstrated good performance, to obtain an additional transfer (Cecchini et al. 2012).
- The Response Programme to the Phenomenon "El Niño" in the Dry Corridor of Central America (PRO-ACT). Funded by the European Union, WFP supported vulnerable populations in the Dry Corridor in Honduras, El Salvador, Guatemala and Nicaragua through the PRO-ACT programme between 2016 and 2018. Its objective was to support families most affected by recurrent crisis, such as droughts caused by El Niño, through food assistance, improving food security and strengthening livelihoods by creating and rehabilitating productive assets, intensifying production at the household level, diversifying income-generating activities and increasing human capital. WFP distributed cash to project participants - usually during the lean season - so that families could purchase food from the local markets. Technical assistance and training of beneficiaries in disaster risk management and climate change adaptation covered topics on crop management, financial education, tree

- nursery establishment, water and soil conservation techniques and food security and nutrition. Food Assistance for Assets programmes on water and soil conservation were established. Actions to promote women's empowerment, participation and decisionmaking at all levels were developed with farmer organisations (WFP 2017).
- The Caisses de Resilience approach developed by FAO in the Sahel³¹ is based on the integrated provision of social, financial and agricultural services. Investing in communities and member-based institutions the programme aims to link immediate assistance interventions and the long-term resilience of poor rural communities. The approach promotes an integrated way of strengthening households' social, technical and financial capacities. These three key dimensions focus on: 1) encouraging social cohesion, solidarity and engagement of vulnerable households in farmers' organisations or women's groups; 2) strengthening productive skills and technical capacities by working on good agricultural and environmental practices for disaster risk reduction; and 3) facilitating access to rural finance opportunities. Strengthened member-based community institutions are empowered to run their own services and, at the same time, support the development of assistance programmes, promote the targeting of the right beneficiaries, inform their members, respond promptly to early-action mechanisms and smooth the logistics of external interventions. In Central America, this approach has included community-managed contingency funds, to respond to emergency needs of the agricultural sector and to enable quick recovery. An important aspect is that it remains flexible and can be adapted to various contexts, addressing needs from emergency situations to development challenges. The integrated approach around the programme has the potential to strengthen resilience of poor rural households' contribution to increased sustainable production, diversification of livelihoods, reduced malnutrition and women's empowerment (Winder Rossi et al. 2017).
- Chapeu de Palha Mulher in Pernambuco, Brazil is a transformative social protection cash transfer programme for combating hunger between sugarcane harvests. It supports women's economic empowerment by training women to take up nontraditional jobs in the construction industry. The programme provides training in non-traditional occupations such as welding, soldering, plumbing or electrics. In addition, there are sessions in which women are encouraged to explore gender stereotypes. Stipends are tied to attendance in classes on citizenship rights and vocational training for women (Newton 2016).

The requirements for integrated programmes to support adaptation are:

- Incorporation of resilience-building measures into benefits and services package such as training in alternative livelihoods, climate resilient practices and climate-smart agriculture or by providing material needs required to develop livelihoods suited for changing climatic conditions climate activities.
- Transforming rural livelihoods along with protecting and adapting to changing climate conditions through the creation of employment options in agricultural value chains, with a view to increasing access to rural nonfarm income.
- Consideration of spill-over effects in the environment and any potential maladaptation incentives
- Access to accurate weather information.
- Providing bank accounts and banking payments for beneficiaries for financial inclusion.
- Ensuring functioning markets are in place to allow for the purchase of inputs and/or marketing.
- Providing opportunities for women to take on community leadership roles or expand their networks.

Final Remarks

Climate change is probably the most pressing issue during the twenty first century, with a stronger burden on poor people, who are also the least responsible to the current climate crisis. Poor people in Latin America and the Caribbean are already experiencing changes in weather patterns as well as more frequent and intense climate-related shocks. This has led to significant negative impacts on people's wellbeing. Advancing adaptation to these changes as soon as possible is essential to protect livelihoods, reduce vulnerability and build people's long-term resilience and avoid maladaptation.

WFP in collaboration with OPM developed this think piece to understand how social protection can support vulnerable and poor people in the context of climate change. Drawing from a perspective of social justice, the starting point is that social protection has the potential to support poverty alleviation, while also addressing vulnerability to climate change.

The paper has set out ten principles for social protection designers to consider in the context of climate change: recognising uncertainty,

prioritising food security considerations, supporting households' long-term adaptation strategies, avoiding maladaptation, understanding trade-offs, incorporating resilience objectives in the theory of change of programmes, improving the environment, adjusting programmes to context, acknowledging modest contributions and working across disciplines.

Programmatic entry points such as linkages with climate-related activities as well as the specific design implications of standard social protection provision to advance climate change adaptation have been presented.

Moving forward, stimulating country action in Latin America and the Caribbean and beyond through context-tailored applications of these principles and programmatic entry points will be a good opportunity for WFP's technical assistance. This will need to be accompanied by evidence generation and more research to continue building the case for social protection in protecting vulnerable and poor people from the impacts of a changing climate.

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Acronyms

ЗРА Three Pronged Approach

ASP Adaptive Social Protection

BFP Bolsa Floresta

CADENA Componente de Atencion a los Disastres Naturales

CCT Conditional Cash Transfer

CBPP Community-Based Participatory Planning

CLEAR Consolidated Livelihoods Exercise for Analysing Resilience

DFID UK Department for International Development

EWS Early Warning System

Food and Agriculture Organisation **FAO**

Fill the Nutrient Gap **FNG**

FbF Forecast-based Financing

FFA Food Assistance for Assets

Greenhouse Gas Emissions **GHG**

HABP Household Assets Building Programme

HELIX High-End Climate Impacts and Extremes initiative (HELIX)

Home-Grown School Feeding Programmes **HGSF**

HSNP Hungry Safety Net Programme

IPCC Intergovernmental Panel on Climate Change

ICA Integrated Context Analysis

IVACC Índice de Vulnerabilidad ante Choques Climáticos

LAC Latin America and the Caribbean

OPM Oxford Policy Management

PATH Programme of Advancement through Health and Education

PES Payment for Environmental Services

PMT Proxy Means Test

PSNP Productive Safety Net Programme

SBCC Social Behavioural Change and Communication

SLP Seasonal Livelihood Programming

UNFCCC United Nations Framework Convention on Climate Change

VCI Vegetation Cover Index

World Bank WB

WFP World Food Programme

Glossary of key terms

CONCEPT	DEFINITION
Social Protection	Social protection consists of policies and programmes designed to protect people from shocks and stresses throughout their lives. It plays a critical role in reducing poverty and inequality while supporting inclusive growth (WFP 2016).
Social Protection in the context of climate change	Social protection programmes helping address the unsafe living conditions of the poor, addressing the underlying causes of vulnerability and promote people's ability to adapt to a changing climate (Arnall et al. 2010).
Shock-responsive social protection	It focuses on shocks that affect a large proportion of the population simultaneously (covariate shocks). It encompasses the adaptation of routine social protection programmes and systems to cope with changes in context and demand following large scale shocks. This can be ex-ante by building shock-responsive systems, plans and partnerships in advance of a shock so as to better prepare for emergency response. Or, it could be ex-post, to support households once the shock has occurred. In this way, social protection can complement and support other emergency response interventions (O'Brien et al. 2018).
Transformative Social Protection	To pursue policies that acknowledge power imbalances in society that encourage, create and sustain vulnerabilities (Devereux and Sabates-Wheeler 2004).
Climate Change Adaptation	The process of adjustment to actual or expected climate and its effects (IPCC, 2014). This would include both: a) adapting to gradual changes in average temperature, sea-level and precipitation; and b) reducing and managing the risks associated with more frequent, severe and unpredictable extreme weather events (WFP 2017).
Disaster Risk Management	Disaster risk management is the application of disaster risk reduction policies and strategies to prevent, reduce and manage disaster risk, contributing to the strengthening of resilience and reduction of disaster losses (UNDRR 2009).
Disaster Risk Reduction	Disaster risk reduction looks to prevent new and to reduce existing disaster risk and while managing residual risk. This contributes to strengthening resilience and the achievement of sustainable development (UNDRR 2009).
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards (UNDRR 2009).
	Resilience is the capacity to ensure that shocks and stressors do not have long-lasting adverse development consequences (FSIN 2014). It is integrated by absorptive, adaptive and transformative capacities (WFP 2015). These include:
Resilience	 Absorptive capacity: resist a shock or the eroding effects of a stressor by reducing risk and buffering its impact, which leads to endurance and continuity of livelihoods and systems.
	 Adaptive capacity: respond to change by making proactive and informed choices, leading to incremental improvements in managing risks.
	 Transformative capacity: change the set of available choices through empowerment, improved governance and an enabling environment, leading to positive changes in systems, structures and livelihoods.
Shocks	For an individual or household, a shock is any unpredictable, exogenous event that affects its well-being negatively.
Maladaptation	Actions which foster adaptation in the short-term but negatively impact systems' long-term vulnerability and/or adaptive capacity to climate change (Magnan 2014).
Loss and damage	The unavoidable consequences of climate change resulting from either climate-related extreme events (such as floods, storms, and droughts) or through longer-term climate variability (such as sea-level rise and glacier retreat). Loss and damage can have significant implications for food security – serious concern for both developing countries and the World Food Programme (WFP 2014).



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