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ASSESSMENT OF THE SENSITIVITY OF THE SOCIAL PROTECTION SECTOR IN RWANDA TO CLIMATE- RELATED SHOCKS



PREFACE

The assessment has been conducted by the World Food Programme (WFP) on behalf of the Social Protection Sector Working Group in January–February 2020. Its aim is to inform the Government of Rwanda and its development partners on the opportunities for further mainstreaming elements of resilience-building and response to shocks within the social protection sector, with a view to enhancing the sector's effectiveness in accelerating the eradication of extreme poverty. This diagnostic therefore explores climate variability and shocks in Rwanda, and identifies opportunities for risk reduction, absorption and transfer—through social protection (not limited to the Vision 2020 Umurenge Programme, VUP) and other disaster risk management mechanisms.

The review forms Phase 1 of the technical assistance project, 'Adaptive Social Protection in Rwanda's Emergency Management' (ASPIRE), funded by the WFP 2030 Fund. Subsequent phases will comprise a high-level forum and national and district-level consultations to explore and refine these findings. It also forms part of activities under the United Nations Joint Programme on Accelerating Integrated Policy Interventions to Promote Social Protection in Rwanda, implemented by UNICEF, WFP and the Food and Agriculture Organisation (FAO).

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EXECUTIVE SUMMARY

This assessment explores climate variability and shocks in Rwanda and identifies opportunities to enhance risk reduction, absorption and transfer through the social protection sector. Enhancing social protection to mitigate the consequences of climate shocks has become a priority for the Government of Rwanda, as shown in several strategic documents such as the National Strategy for Transformation 2017-2024 and the Social Protection Sector Strategic Plan. Findings are presented from an analysis of weather trends, a literature review and primary research via key informant interviews and focus groups at national, district and sector level conducted in early 2020. Opportunities arising for the overall sector as well as specific programmes are explored.

The social protection ‘policy problem’ in relation to climate-related shocks in Rwanda is unique in two respects: it is mainly about minimising idiosyncratic fluctuations in poverty—households being pushed (or pushed deeper) into poverty, or households losing assets—not about covariate shocks where thousands of people are affected by one event; and the priority is to enhance collaboration between government entities responsible for disaster risk management (DRM) and social protection, rather than to find a way to take over caseloads from international agencies or streamline large donor-funded emergency responses with government social protection systems.

A detailed analysis of nearly 40 years of climate-related data (1981–2019) highlights that exposure to climate-related shocks varies across Rwanda, with shocks being generally very localised. Rainfall tends to vary quite drastically from one year to the next and there has been a strong increasing trend in maximum temperature across the country. The combination of topography and these weather patterns leads to frequent localised floods, landslides and droughts. Western, Southern and Northern provinces are prone to landslides and flooding, while Eastern Province is exposed to drought. Climate related hazards are damaging houses, infrastructure and crops and making households resort to coping strategies that erode their livelihoods, undermining resilience. The cumulative effects are considerable.

Rwanda has a well developed government-led **social protection system** that already goes a long way in addressing weather-related shocks by virtue of efforts to ‘do good social protection’. The assessment considers five dimensions of the overall architecture of the social protection system, with the following findings:

- Policies and their coherence.** There is a strong enabling policy environment with good integration of DRM into social protection policies and clear backing for climate-sensitive and shock responsive social protection. Conversely, in DRM policies, the integration of social protection considerations could be further explored. A further sharpening of the focus of the social protection policy environment on responding to climate related shocks will need to consider trade-offs with other policy objectives. This includes resolving whether the Vision 2020 Umurenge Programme (VUP) Classic Public Works programme is to be expanded or contracted.
- Institutional arrangements.** The decentralized system of governance facilitates local coordination between social protection, DRM and others. Roles and responsibilities between district disaster management and social protection staff are often shared and there are indications of strong cooperation. Actual staffing capacity varies across districts. This, plus variations in technical and financial resources, necessarily determines the quality of programming for both social protection and DRM activities.
- Financing.** Government spending on social protection has been steadily expanding. An important element of whether a social protection system can be responsive to shocks relates to how it is financed and the scope for allocating additional funds to it. The same need for rapidly accessible funding applies equally to emergency response. The creation of the Disaster Response Fund highlights an understanding of the need for the timely response to shocks to be underpinned by a rapid release of funds. Further attention is warranted as to how it can be operationalised. The government is looking into the possibility of sovereign risk pooling. Besides identifying where funding might come from, an equally important question is how it will be released and subsequently spent. One potential option, for predictable hazards for which reliable forecasting is possible, is for the release of funds to be triggered by weather forecasts (‘forecast-based financing’). Given the enormous climate variability and localised shocks in Rwanda, further research is needed to ascertain whether or not the required level of accuracy is feasible.
- Support systems.** The Ubudehe system of classifying all households according to their socioeconomic status provides a valuable service across the sector. Its use is under review as an enormous number of programmes now rely on its classification for selecting their beneficiaries, resulting in disincentives for households to be reclassified. A shock-affected household may request a reassessment of their Ubudehe status, but this reportedly can take up to a year. Exploring a faster reassessment process may enable faster access to social protection support in the event of a shock. In any case, emergency assistance is currently not linked to Ubudehe or VUP status, which may be appropriate as the households affected by shock may not neatly conform to a specific Ubudehe category and VUP coverage is currently at 4% of the population. In other countries there is increasing international enthusiasm for new large-scale databases to be created to form the basis for selecting beneficiaries in the event of a shock. In Rwanda this may be redundant due to the existence of the Ubudehe database, the highly localized nature of hazards that means that a static database may not be able to tell which those are, and the finding that local authorities are generally in a position to identify the affected households based on their intimate local knowledge and community consultation.
- Monitoring and evaluation.** Strategic interventions and outcomes in the Social Protection Sector Strategic Plan include targets related to both climate-sensitivity and shock-responsiveness. This lays the foundation for effective delivery via annual performance contracts (*imihigo*) for government staff. Three indicators merit further consideration. First is to clarify how the ‘climate-sensitivity’ of the VUP Public Works is measured. Second, an important question remains unresolved as to whether inclusion in a social protection programme is seen as a positive or negative sign of household resilience. Globally, the ability of households to access social protection programmes is seen as a positive contribution to risk absorption. In Rwanda it appears that progress towards resilience is being measured by how much people exit programmes rather than join them. Third, the use of the poverty gap, and not just the poverty headcount, might increase the country’s ability to measure its progress towards poverty reduction. This considers all contributions (including those that help very poor people to become slightly less poor) rather than only those that lift a household entirely over the poverty line.

Specific **social protection programmes** also have potential to make further contributions to risk reduction, absorption and transfer goals.

- For **risk reduction**, there is untapped potential to reduce disaster risk in communities through VUP public works, and specifically activities such as construction and maintenance of drainage systems in flood prone regions or restoring forests in highland slope areas vulnerable to landslides. Public communication through the VUP could support household risk reduction measures.
- For **risk absorption through reduced vulnerability**: the VUP Direct Support scheme already contributes to reducing vulnerability by smoothing household consumption year-round. The level of the transfer further reduces vulnerability by being linked to household size. For VUP Expanded and Classic Public Works beneficiaries the effect is somewhat lower because of the lower transfer value. However, coverage is very limited with just 4% of the population covered by the VUP. This contrasts with the Community Based Health Insurance scheme which reaches 74% of the population. The value of the VUP in building resilience is further enhanced using Savings and Credit Cooperative Societies (SACCOs) which offer financial services. Activities underway to further digitize the VUP payment process should enhance the programme's overall contribution to building resilience.

As for other schemes, the Girinka programme is intended to meet several resilience objectives at once. Design adjustments currently being made should improve its relevance for risk absorption, such as by enabling households to own smaller livestock which will improve the affordability of animal feed compared with owning a cow. Meanwhile the Crop Intensification Programme, which subsidises agricultural inputs, has some aspects which have the potential to improve household income, but others which may increase exposure to climate risks.

- For **risk absorption through disaster response**: The potential of the VUP for shock response is constrained by its coverage and therefore the likely lack of correlation between a household's inclusion in the VUP and its chance of being affected by a shock. The tendency among international actors to look for a single 'flagship' programme that might serve as an entry point for emergency response relies on an assumption that the programme has its own infrastructure or resources that are superior to alternatives. However, the VUP itself draws on the systems already established for the social protection sector as a whole, e.g. a national database (Ubudehe) and payment mechanisms (SACCOs). This use of common systems is a sign of the maturity of the country's integrated social protection systems.

Furthermore, Rwanda has functional emergency response mechanisms that are an existing pillar of the country's social protection system. Anecdotal evidence suggests that community-based targeting led by cell leaders can be efficient at identifying those in need. A more in-depth analysis of the in-kind response to drought and other disasters could help identify good practices and determine the extent to which this system is the most efficient and sustainable option for responding to weather-related shocks. A gap highlighted by this assessment is the provision of psychosocial support for disaster affected people.

- For **risk transfer**, the National Agricultural Insurance Scheme (NAIS) is a newly launched climate risk finance mechanism that is expected to provide predictable funding and support to households affected by climate shocks. There is potential for this to be linked with the VUP Public Works. Community-based health insurance is an important risk transfer mechanism that covers some three-quarters of the population and enables affected people to access health care, transferring some of the financial risk of the shock.

As a follow up to this study, the authors propose a high-level workshop and consultations to review the findings and outline potential areas for subsequent analytical pieces.

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PART A: BACKGROUND

1. Introduction

1.1. Context of the study

The assessment aim is to inform the Government of Rwanda and its development partners on the opportunities for further mainstreaming elements of resilience-building and response to shocks within the social protection sector, with a view to enhancing the sector's effectiveness in accelerating the eradication of extreme poverty. It has been conducted by the World Food Programme (WFP) on behalf of the Social Protection Sector Working Group in January–February 2020.

Rwanda has a unique topography and weather patterns. The country is being hit increasingly frequently—and unpredictably—by generally localised climate-related natural hazards, such as heavy rains and unusually long dry spells. These can lead to shocks such as flooding, landslides and poor harvests. In 2018, about 40% of households had experienced a period of difficulty in the preceding 12 months that had affected their food security or assets; of those, about half said the cause was a natural hazard (WFP, 2018). Shocks can result in people buying less food, using up savings, borrowing or selling off assets, among other negative coping strategies (NISR, 2018a).

Managing disaster risk is a cross-cutting concern, to which social protection measures are recognised as making an important contribution. Social protection can lessen the likelihood of such shocks, alleviate their consequences and promote conditions conducive to improving household-level resilience and wider economic growth. Social protection systems protect the most vulnerable from shocks and stresses throughout their lives. They address multiple inter-related issues including poverty, inequality and food insecurity—thus facilitating several Sustainable Development Goals, which contributes to reduce vulnerability. At the same time, synergies between social protection and other aspects of disaster risk management (DRM) are important.

Enhancing social protection to mitigate the consequences of climate shocks has become a priority for the Government of Rwanda, as shown in several strategic documents such as the National Strategy for Transformation 2017-2024 and Social Protection Sector Strategic Plan (see section 4). Investments in social protection more broadly are increasing. Meanwhile a Disaster Response Fund has recently been approved by parliament, and conversations are ongoing as to how it might be operationalised. It is therefore timely, first, to consider how much social protection measures contribute to the prevention of, and response to, shocks; and second, to highlight options for improving their climate-sensitivity and shock-responsiveness, and enhancing their integration with other measures for DRM.

1.2. Method

The research method has comprised several elements. These are the analysis of data on weather trends in Rwanda; a narrative review of published and grey literature in a national and global context; and 10 days of primary research via key informant interviews and focus groups at national, district and sector level. This included short visits to Karongi district, in Western Province, and Kayonza district, in Eastern Province. The districts were selected because of the contrasting shocks they typically face: Karongi has a greater propensity for heavy rain leading to floods and landslides, while Kayonza has more experience with drought events.

1.3. Structure of the report

The rest of the report is structured as follows. Section 2 presents the conceptual framework; section 3 explains climate variability in Rwanda and resultant shocks; section 4 highlights current arrangements for disaster risk management (DRM) and social protection; section 5 examines the climate-sensitivity and shock-responsiveness of the overall social protection sector, while section 6 reviews the Vision 2020 Umurenge Programme (VUP) and other social protection programmes specifically, with a view to identifying entry points for enhancing the relevance of social protection to weather-related shocks. Section 7 concludes with some high-level options for further exploration, and a proposed way forward.

2. Framing the concepts

2.1. Climate-sensitivity and shock-responsiveness: a disaster risk management approach

Disasters, development and poverty are closely interlinked:

Destruction of assets and livelihoods in disasters set back hard-won development gains and worsen poverty, often for extended periods of years. Progress in ending extreme poverty may be reversed in the face of a disaster event and poverty re-entrenched (Integrated Research on Disaster Risk Programme, 2014, p.1)

A hazard may easily trigger a marginally non-poor person or household to lapse into poverty, or a poor one to fall into deeper poverty. While large-scale disasters tend to grab headlines, even small-scale, localised shocks can cumulatively constrain national development, besides causing hardship and suffering to the individuals and households concerned. The imperative to reduce the likelihood of these shocks occurring, and to minimise their consequences, is clear.

Disaster risk depends not just on the severity of the hazard (such as heavy rain or drought), but also on people's exposure and vulnerability to it (Cardona *et al.* 2012). Being 'exposed' to the hazard event means being in the area where it is likely to occur. Being 'vulnerable' to it means being susceptible to being negatively affected when it occurs. A person may be exposed to a hazard but not be vulnerable, if they have the capacity to anticipate, adapt to and/or cope with the event when it happens.

It follows that one can reduce a person's risk by reducing either their exposure, or their vulnerability, or both. It may be feasible to reduce the *exposure* of people and their assets to a hazard, either temporarily or permanently (for example, by relocating them). Even when exposed, there are many ways to reduce *vulnerability* to the hazard. Using a disaster risk management approach, we group these strategies into three categories:

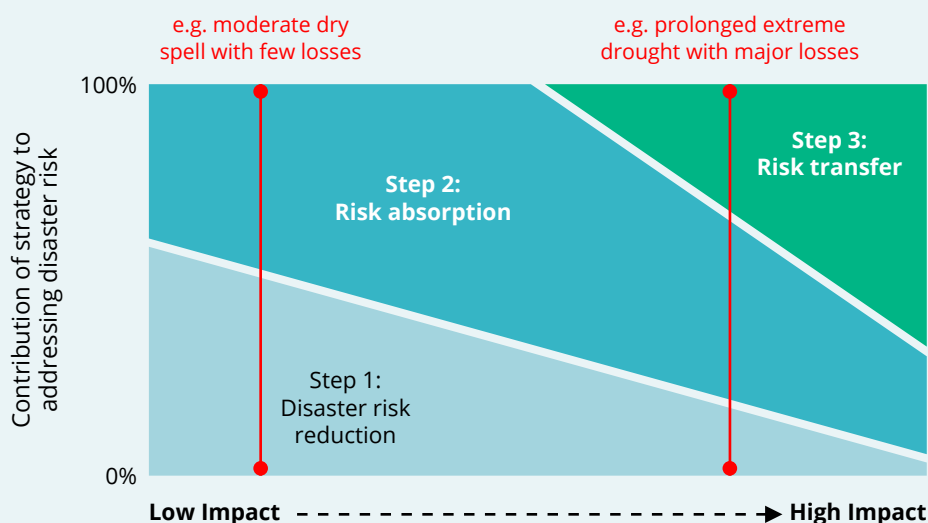
1. **Risk reduction:** reducing the likelihood that the hazard will cause a shock. For example, while heavy rain may be unavoidable, one can reduce the probability that it results in flooding or landslides.
2. **Risk absorption:** having the capacity to anticipate or recover from the shock, for instance by having sufficient economic resources to cope with losses. The person or community retains the risk but is able to deal with it. This can be done in two ways: by strengthening the person's overall capacity regardless of any particular shock, or by acting in response to (or in advance of) specific shocks.

3. **Risk transfer:** shifting the (financial) consequences of the shock to another party, mainly through insurance.

The adverse impacts of hazards are best addressed by an approach that contains all three elements, which are relevant for shocks of different levels of severity. Investments in disaster risk reduction are useful for all shocks, but it is likely to be more feasible to reduce the risk arising from small-scale, low-impact events—even if they are relatively frequent—than to eliminate the risk of major catastrophes (Figure 1). Any risk that cannot be removed must be dealt with by other means (risk

absorption and risk transfer). Households may be able to absorb any remaining risk from low impact events such as a short dry spell that results in a minor loss of agricultural productivity. However, as shocks become more severe it becomes harder for households to bear the consequences. At this point risk transfer measures may become appropriate. These more commonly apply to shocks that occur less often but are more severe: one would not expect an insurance programme to provide pay-outs every year to cover households during a lean season, but they might cover some of the consequences of extreme weather events that happen, say, every ten years.

Figure 1 A layered approach to addressing disaster risk



Source: Authors.

We will use this classification in this assessment to analyse the potential contribution of social protection to addressing crises. We look here at weather-related hazards—extreme rainfall or dry spells—and resultant shocks, notably drought (more common in the eastern part of Rwanda) and floods and landslides (especially in the western part) (see section 3). By

agreement this assessment does not look at long-term climate change patterns, though it will be important for the social protection sector to factor in climate projections into its long-term planning. Measures identified for mitigating the consequences of short-term climate variability remain relevant to some extent for climate change.

Box 1: Disaster risk management vs. social risk management

We are talking here about managing disaster risk. This is a slightly different perspective on risk compared with the 'social risk management' framework developed for use in social protection by the World Bank (Jorgensen and Siegel, 2019; Holzmann and Jorgensen, 2000). In the social risk management approach, 'risk' refers to the risks to individuals and households of suffering losses of income or assets, or falling into poverty. In the disaster risk management approach we are starting further upstream, with the risk of the disaster event occurring in the first place.

We can imagine risks as cascading from one impact to another. Heavy rain leads to a risk of flooding, which leads to a risk of

the inundation of a household's crops or the spread of disease, which leads to the risk that a household's income drops or a family member falls ill, and so forth. In this report, when we refer to 'risk reduction' we mean reducing the risk of the disaster. The strategies that a household employs to reduce its own risk of income loss as a result of the disaster are counted here as 'risk absorption' measures, especially such measures that it takes to strengthen its resilience before the hazardous event occurs. We will see in the next subsection that while the main role of social protection is in risk absorption and risk transfer, it can still play a small role in disaster risk reduction (e.g. through public works programmes that reduce erosion).

2.2. How can social protection help?

When we look at weather-related hazards through a risk management lens, we immediately see the relevance of social protection interventions. The core function of social protection is to reduce people's vulnerability to poverty, food insecurity and other forms of deprivation, whatever their cause, by smoothing consumption, preventing loss of incomes and assets, compensating for losses, supporting the accumulation of resources, and promoting self-reliance. In other words, it can enhance people's ability to reduce, absorb or transfer the risks they face. The routes by which social protection instruments can

achieve this are summarised in Table 1. The more that social protection interventions—and the systems that underpin the sector as a whole—fulfil these functions in a way that takes into account weather-related hazards, and responds *ex-ante* (to a forecasted shock) or *ex-post* (after a shock) to the likely shocks that they give rise to, the more we can confidently say that the social protection system is climate-sensitive and shock-responsive.

So how can social protection interventions maximise their ability to contribute to DRM in this way? Let us look in turn at each of the categories.

Table 1. Potential contribution of social protection instruments to DRM

DRM element	Contribution of social protection instruments	
	Instrument	Means of contribution
Risk reduction	<ul style="list-style-type: none"> Public works programmes Asset creation schemes 	Direct contribution: <ul style="list-style-type: none"> Construction of community infrastructure to promote soil and water conservation (e.g. terracing, drainage ditches) Tree planting to reduce erosion and prevent environmental degradation
	<ul style="list-style-type: none"> Any social assistance programme 	Indirect contribution: <ul style="list-style-type: none"> Messaging to beneficiaries about choice of crops that are resistant to drought / waterlogging, or about cultivation measures that increase water content of soil (conservation agriculture) Weather forecasts to programme beneficiaries to inform farmers about the best planting time
Risk absorption	<ul style="list-style-type: none"> Cash and in-kind transfers Asset transfers Input subsidies Livelihood support schemes Active labour market policies Village savings and loans schemes Microcredit 	<ul style="list-style-type: none"> Transfer of resources to increase income / consumption Increase in household assets Promoting savings Minimisation of negative coping strategies Diversification of livelihoods Enabling households to become less risk-averse Improving households' creditworthiness
Risk transfer	<ul style="list-style-type: none"> Crop / livestock insurance Health insurance 	<ul style="list-style-type: none"> Protecting households against financial consequences of extreme weather events / health shocks Enabling households to become less risk-averse

Source: Authors. Note: Informal social protection (private arrangements among households and communities) also contribute significantly to risk management; public actions should not undermine them.

The best option in a country may require implementing a combination of these, combined with other disaster response interventions and with the contributions of other sectors ranging from agriculture to infrastructure.

2.2.1. Social protection and risk reduction

Social protection interventions can contribute directly and indirectly to disaster risk reduction. Public works programmes and other asset creation schemes can be used to create infrastructure that reduces the likelihood of floods and landslides occurring, such as terracing and tree planting. Programmes that do not have these direct risk reduction objectives can nonetheless contribute indirectly. For example, the distribution

of social assistance is sometimes accompanied by opportunities for sharing messages with beneficiaries: this might include information sessions for farmers on cultivation methods that promote soil and water conservation, or alerts about imminent weather shocks¹.

2.2.2. Social protection and risk absorption

As noted above, social protection can improve risk absorption either by improving households' well-being and reducing vulnerability year-round, regardless of any weather-related shock, or by being tailored to take specific types of shock into account. The first—'just doing good social protection'—is their core job, squarely within the remit of social protection actors.

¹ If these ideas are newly introduced into existing schemes, one can consider them examples of 'design tweaks', in the language of the literature on shock-responsive social protection (see e.g. O'Brien et al., 2018).

The second—making adjustments in light of certain shocks—may or may not be appropriate, depending on the context. Whether such adjustments should be made depends on factors such as whether this diverts resources from other priorities, overloads staff and systems or disrupts the routine functioning of the underlying programmes; and if alternative, more cost-effective methods of supporting households are available. We look briefly at each.

Social protection for reducing vulnerability

Social protection instruments are intended to help people meet the needs that arise throughout their lives, and to reduce their vulnerability to shocks. They do this through all the means indicated in Table 1: by increasing consumption and savings, facilitating the accumulation of assets, supporting the diversification of livelihoods and so on. Ideally the system is flexible enough to allow people to access support whenever they need it, regardless of how many other people also need it at the same time and regardless of what causes the need: it should not matter whether the adversity they are experiencing (e.g. illness, job loss, crop failure) is also affecting other households or not. Improving the coverage, comprehensiveness and adequacy of programmes are three key objectives of the global social protection agenda; to this one can add improving quality, such as timeliness, accountability, cost-efficiency or sustainability of financing. All these improvements will contribute to reducing people's vulnerability.

Every component of a social protection programme can be assessed for its effectiveness in reducing vulnerability more broadly. These include processes for targeting (who is supported), enrolment, delivery of assistance such as the cash or in-kind transfer, case management (including handling complaints and updates), monitoring and evaluation (M&E), communication and coordination, as well as the financial, human and material resources that serve as inputs. If the design or execution of these components is adjusted so as to take better account of weather-related shocks routinely without having other detrimental impacts, one can consider that their climate-sensitivity and shock-responsiveness is improved². Programmes may also be adjusted to be 'climate-proof' and 'weather-proof', continuing to function even if shocks occur (such as to enable recipients to continue to access payments during a flood).

Social protection for responding directly to shocks

Social protection programmes or systems may channel extra assistance in the event of shocks whose impact exceeds the level of needs they usually address. As mentioned, there is no reason why they *must* serve this role: the appropriateness of this decision depends on the context. Assistance may be envisaged in three stages:

- Anticipatory action—providing assistance before a shock has occurred, in the knowledge that people are likely to be affected
- (Emergency) response—providing assistance during the shock
- Post-disaster recovery—providing assistance subsequently, to help people recover.

This might entail making elements of the social protection system available for disaster management actors to use (staff, beneficiary lists, payment methods, helplines etc.)—'*piggybacking*' on the most useful components of the social protection system, in the language of shock-responsive social protection.

Alternatively, the social protection implementers themselves might run their own response. They might expand the coverage or the value of assistance provided under an existing programme (known as '*horizontal expansion*' or '*vertical expansion*'). These options, if undertaken as a temporary measure rather than as a permanent change, should be undertaken with caution and always in consultation with the lead agency for disaster management, to ensure that they help the overall response rather than hindering it by introducing fragmentation³. They might also introduce and/or maintain a separate programme for emergency response, to be activated or scaled up as required.

All these actions will benefit from measures to improve 'preparedness', or readiness for the shock: the more that decisions on design and implementation can be made in advance, such as how recipients will be identified and how assistance will reach them, the less need there will be to revert to ad-hoc decision-making at the moment of the shock. For example, in the case of anticipatory action, this would include identifying what event or indicator will trigger a response, how it would be funded and what activities it would support.

Social protection and risk transfer

Two common types of risk transfer mechanism at the household level are crop and livestock insurance. These may be considered social protection mechanisms, especially when they are targeted at more economically vulnerable people who might otherwise have to resort to social assistance if they experienced losses. They serve a dual role. First, they provide compensation if a hazard results in the loss or depletion of assets in line with the event for which the household is insured. Second, the very fact of holding insurance may make households more open to investing in such assets; this may accrue benefits even if a shock does not occur.

Health insurance is another risk transfer instrument in social protection. It provides a cushion against immediate out-of-pocket health expenditures.

An enabling environment for climate-sensitivity and shock-responsiveness in social protection

Besides the contributions of specific interventions, the overall architecture of the social protection system in a country can be developed in a way that improves the sector's relevance to hazards. We can consider five dimensions:

1. **Policies and strategies.** Do social protection policies and strategies recognise the contribution of social protection to addressing shocks and crises, and identify measures to reduce, absorb or transfer the risk?
2. **Institutional arrangements and coordination.** Social protection actors will be just one group contributing to DRM efforts in a country, most likely under the guidance of a disaster management authority. Is their role clearly defined? Do arrangements exist to facilitate coordination with the DRM agency, and to participate in planning? Are staff in place and able to undertake relevant actions?

² These are further examples of 'design tweaks' as per the shock-responsive social protection literature.

³ Such fragmentation can occur if, for example, the division of the disaster response between emergency response actors and social protection actors results in duplication or gaps in the people assisted by their respective interventions. Another type of fragmentation might be differences in the transfer value, if social protection actors choose to peg the value of assistance to an existing programme while emergency response actors calculate a different value on the basis of the need emerging from the specific shock.

3. **Financing.** Is it clear how risk absorption and risk transfer activities will be funded within social protection? Risk absorption measures may benefit from routine budget allocations, supplemented by contingency budgets. These should be timely and predictable. For funding that responds to a specific shock, rather than for general improved resilience, linkages with an early warning system may facilitate the early release of funds that may enable actions to be undertaken before households resort to adverse coping strategies. Meanwhile, risk transfer measures are likely to entail the setup of insurance schemes, with policies that benefit individual households needing to be registered beforehand. Beyond those that exist at a household level (insuring the assets of individual households), insurance can also be set up at government level through sovereign risk insurance pools, which may release funding to governments that they can then use to deliver assistance to households and communities.
 4. **Support systems.** If the social protection sector contains systems and procedures that are designed to support multiple programmes (targeting procedures, databases, helplines, appeals procedures etc.), are these also relevant and usable in the event of a shock? Do they enable shock-affected households to access the assistance they need? Can they be made more relevant without adversely affecting their core function?
 5. **Monitoring and evaluation (M&E).** Is the relevance and effectiveness of the contribution of the social protection sector to weather-related shocks being measured? What are the indicators of success?
- We explore options for improving the climate-sensitivity and shock-responsiveness of the overall social protection architecture in Rwanda in section 5, and of the specific programmes (including VUP) in section 6.



PART B: CURRENT CONTEXT

3. Climate and shocks in Rwanda

3.1. Climate averages, variability and recent trends

Exposure to climate-related shocks varies across Rwanda, owing partly to the existence of three distinct geographical areas. Western and north-central regions are characterised by mountains, highlands and steep valleys, where elevations often exceed 2,000m; in the centre the land is typified more by rolling hills; while to the east, the hills gradually decline to form lowlands with occasional hills and valleys (WFP, 2018).

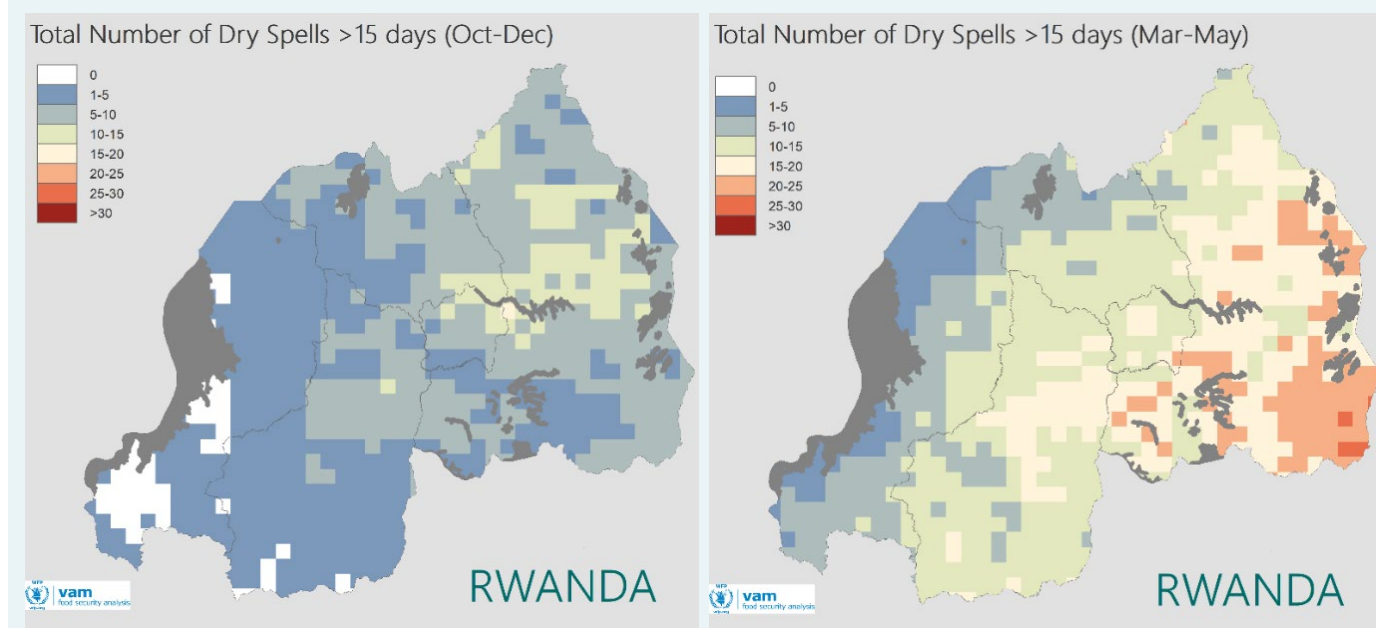
The distribution of average annual rainfall, temperatures and vegetation levels are all largely driven by this topography (WFP, 2020). Highest seasonal rainfall occurs along the western highlands—especially in the southwest—and decreases further east. Minimum and maximum air temperatures average 10C and 20C respectively in the west, but rise to an average of 15C and 27C in the lowlands of the east. Maximum land surface temperatures, which typically reach 23C in the west, may reach 40C in the east. Long-term vegetation levels reflect a similar pattern, with higher

levels of cover in the protected natural forest in the southwest and west, tending towards lower levels in the east; though the lowest vegetation levels are found in the greater Kigali urban area and areas to its south, for reasons unrelated to climate.

Broadly, the year can be divided into two main agricultural seasons, season A from around September to December, and season B from March to May. Rainfall peaks around October–November, and again in March–April. While in the west the growing season is more or less year-round, in the east it tends to start later and finish slightly earlier.

Historically, the March to May period rainfall has experienced a much higher number of dry spells than the October to December season. This is particularly so in the southeast where dry spells last on average 15–20 days. Dry spells are defined as continuous periods with rainfall less than 2mm. Prolonged dry spells result in agricultural drought that can lead to failed crops, depleted pastures and disrupted markets. The long-term tendency is for an increasing number of dry spells in the southwest, north and southeast zones during the March–May season.

Figure 2: Number of dry spells between 1981/82 and 2018/19, by season



Source: WFP, 2020.

Detailed analysis of nearly 40 years of climate-related data (1981–2019) for this study reveals also the variability and longer-term trends (WFP, 2020). In Rwanda, a key feature of rainfall is the high inter-annual variability: in other words, it is 'normal' for rainfall to vary quite drastically from one year to the next. For example, record rainfall in 1997–98—the highest in 40 years of data analysed—was immediately followed by two years with record lows. There is a moderate long-term trend in eastern regions for increased seasonal rainfall, while western regions tend slightly towards decreased rainfall—flattening the disparity across the country—but this very modest tendency is completely swamped by the magnitude of inter-annual variability. Meanwhile, there has been a strong increasing trend in maximum temperature countrywide.

3.2. Weather patterns lead to climate shocks

The combination of topography and these weather patterns results in the tendency for floods, landslides and droughts. Western, Southern, and Northern Provinces are prone to landslides and flooding. About 40% of the population is exposed to this risk (WFP, 2018). Meanwhile Eastern Province is the region most exposed to drought hazards, which is also the area where irrigation is particularly low. Some 90% of crops are grown on sloping land (FAO, 2020). In hilly or mountainous areas with high annual rainfall, the risk of landslides and erosion can be further compounded by over-exploitation of the environment, such as deforestation or inappropriate farming (UNDP, 2018).

Flooding, landslides and violent winds occur frequently, but often affect highly localised areas: even within a single village, a few people might be affected while others are not. But cumulatively, they may be affecting thousands of people every year. Not every natural hazard, then, results in a large-scale disaster that receives national and international attention and/or that needs humanitarian assistance. During 2015–17 alone, MINEMA recorded about 1,800 localized small-scale disasters (UNDP, 2018). Most were induced by natural hazards: heavy rains and winds, floods and landslides, storms and lightning strikes. These small-scale but high frequency disasters have cumulative effects that undermine development gains and the resilience of communities.

Such hydrological and meteorological hazards necessarily have a greater impact on the livelihoods of households who rely heavily on agriculture. Most rural households rely on rain-fed cultivation, which is made harder by the enormous variation in rainfall from one year to the next. While long term trends are relevant, the major role in terms of impacts on agriculture is played by the very considerable inter-annual variability in rainfall. Major droughts usually correspond with seasons that have longer and/or more frequent dry spells. A ‘bad’ year can have significant impacts at the household level, and also on the national economy: agriculture contributes nearly 30% of GDP, while more than half the labour force cite independent farming as their primary occupation (NISR, 2018b; NISR, 2019).

3.3. Consequences of climate shocks on household well-being

A vulnerability analysis in 2018 found that about half of households had engaged in livelihood strategies that risked leading to asset depletion in the month before the survey (WFP, 2018). About 5% of households reported ‘emergency’ negative coping strategies such as migrating the entire household, begging or selling the last female animals; for others, coping strategies ranged from purchasing food on credit or using up savings, to decreasing expenditure on productive assets or harvesting immature crops. These may seriously impact households’ future resilience.

Climate-related hazards are likely to be contributing to such behaviours. They damage houses, infrastructure and crops; this in turn results in loss of income, food insecurity and increased food prices, and constrains access to markets, education and health services. A consultation with a rural community in a mountainous area provides a snapshot of the types of shocks that people face, and their consequences (Box 2).

Recent qualitative research with beneficiaries of a key social protection programme, the VUP, reflected similar concerns (Holmes *et al.*, 2019). In respect of the dry season, households reported negative impacts including poor harvests and price rises, exacerbated by reduced incomes because they were fewer wage farming opportunities. Rapid-onset shocks damaged homes and crops. Overall, VUP households reported that, ‘they do not have coping mechanisms at their disposal to help them manage large-scale shocks’ (Holmes *et al.*, 2019, p.37). The VUP benefit offered support for recovery on a smaller scale, such as for buying replacement seeds or medicine, though inevitably was not sufficient in the event of extensive damage requiring reconstruction of houses.

Box 2. Natural hazards and their consequences: a snapshot from one community

One community consulted for this study is located in a very hilly area, accessible from the main road by only a single-track unpaved road, many kilometres long. The area is prone to heavy rain and landslides, visible throughout the landscape; but occasionally an exceptional dry spell also occurs, as it did in 2017.

The community explained the hazards they faced: ‘Sometimes we’re expecting normal rain but we get heavy rain’ ... ‘Normally we’re used to getting the heavy rain in December and April, but now there’s no pattern. It’s kept raining since December’ ... ‘Normally we’d plant beans in September. But what can we do if it doesn’t rain from September to November?’ They described how landslides blocked the road; rains caused bridges to be washed away; strong winds blew the roofs off houses. Crops were diseased or did not grow properly.

The consequences of these shocks were wide-ranging. Road blockages were particularly problematic: they disrupted the movement of goods and people between the village, neighbouring towns and Kigali. They were unable to sell charcoal; there were food shortages, resulting in higher prices. Children could not reach school. Assets such as houses and crops were lost—though often one household might be affected while their neighbour was not—and, they noted, even government property and assets were not spared. Families’ careful plans for the future were up-ended. Some people experienced trauma or felt themselves to be a burden on others in the community who had to host them.

The community’s numerous strategies for addressing these shocks ranged from avoidance (moving to less high-risk areas) to risk reduction (planting trees and crops around the house, digging ditches, harvesting rainwater, terracing) to risk absorption (laying trees across the road where bridges had been washed away). Generally, they said, they knew what to do, but did not always have the means to do it.

Source: Community interview, February 2020

4. Current arrangements for DRM and social protection

4.1. DRM

The institutional and legal frameworks for DRM are led by the Ministry in Charge of Emergency Management (MINEMA), which is responsible for coordinating DRM and is the central operational actor during all phases of disaster management in collaboration with other stakeholders. Its remit covers disaster prevention and mitigation, as well as response and recovery, planning and monitoring, and the coordination of projects by other partners.

A National Disaster Management Policy was adopted in 2012 by MINEMA's predecessor, the Ministry of Disaster Management and Refugee Affairs (MIDIMAR). Each hazard is assigned a lead institution to put in place all actions required to prepare for, respond to and recover from the hazard, while overall coordination is under MINEMA. The policy notes that it is the responsibility of every ministry to,

'[...] take measures necessary for prevention of disasters, mitigation, preparedness and capacity-building; integrate into its development plans and projects the measures for prevention or mitigation of disasters; respond effectively and promptly to any threatening disaster situation or disaster [...]' (MIDIMAR, 2012, pp.24-25).

A Disaster Management Plan was developed in 2013 to implement the policy. The government produced a National Risk Atlas in 2015, containing detailed maps and data on five main hazards—droughts, floods, landslides, earthquakes and windstorms¹. The atlas also assesses the exposure of people, communities and assets to each. A National Contingency Matrix Plan was published in 2016, that identifies responsibilities, requirements and standard operating procedures; contingency plans have also been developed for each major hazard (such as the National Drought Contingency Plan in 2018). Disaster risk reduction has been incorporated into local development plans.

Besides MINEMA, several government ministries have responsibilities that touch on DRM, directly or indirectly. These include the Ministry of Finance and Economic Planning (MINECOFIN), the Ministry of Agriculture and Animal Resources, MINAGRI (which is responsible for food security), the Ministry of Environment, the Rwanda Environment Management Authority (REMA) and Meteo Rwanda, in addition to the Ministry of Local Government (MINALOC) and the Local Administrative Entities Development Agency (LODA) whose social protection-related remit is described below. Development partners such as the United Kingdom Department for International Development (DFID) and the World Bank, and United Nations entities such as the World Food Programme, the Food and Agriculture Organisation, UNICEF and the United Nations Development Programme also play a role in providing technical assistance, and supporting the implementation of DRM interventions.

At subnational level, DRM efforts are coordinated by District Disaster Management Committees and Sector Disaster Management Committees (MIDIMAR, 2012). These subnational committees are in charge of coordinating and implementing disaster management activities for their respective administrative levels. These committees tend not to be active all the time but are expected to convene periodically to discuss readiness for disasters, brief on any new arrangements and identify any changes needed, besides supporting actual disaster response.

A Disaster Response Fund was set up by law in 2015 but is not yet functional (see section 5.3 below). The intention is that, once operating, this fund should improve the flexibility of the usage of funds and enable a speedier response to emergencies compared with requesting funds after a disaster has occurred.

4.2. Social protection

Although Rwanda's social protection system is relatively young, it is evolving into a strong government led system—implementing programmes at significant scale, and progressively introducing new instruments. Rwanda inaugurated a National Social Protection Policy in 2005 aimed at the establishment of a social protection system that delivered "universal protection for all citizens", and the first Economic Development and Poverty Reduction Strategy (EDPRS) (2007–12) established social protection as a formal sector, with the VUP as a flagship programme. The second EDPRS (2013–18) and the associated National Social Protection Strategy (2013–18) delivered a significant expansion of coverage and improved effectiveness.

Most recently, the Government of Rwanda updated its National Social Protection Policy (2018) which reconfirms its commitment to the realisation of an inclusive and comprehensive social protection system. The policy defines social protection as,

'All public and private income transfers schemes, social care services, livelihood support and insurance schemes that, together, ensure that all extremely poor and vulnerable people have income security, a dignified standard of living and are protected against life-cycle and livelihood risks with a view to achieving sustainable graduation and self-reliance.' (MINALOC, 2018).

The policy is backed by a Social Protection Sector Strategic Plan (2018-2024) (MINALOC, 2017). This classifies Rwanda's social protection interventions under four pillars: (1) *Social security schemes*, both non-contributory and contributory, that aim to achieve consumption-smoothing and a minimum standard of living through the provision of income support; (2) *Emergency assistance*, which provides temporary or one-off assistance to address short-term risks or deprivations (3) *Social care services* (4) *Linkages* to complementary livelihood support services. These interventions are intended to support seven priority objectives, one of which is, 'To strengthen support for households and communities affected by disasters and shocks' (MINALOC, 2017, p. 25).

Both documents are consistent with the National Strategy for Transformation 2017-2024, the government's national seven-year planning document. Its pillar on 'Social Transformation' includes a commitment to, 'Promote resilience to shocks and enhance graduation from poverty and extreme poverty through improving and scaling up core and complementary social protection programmes' (Republic of Rwanda, 2017, p.viii). The document also highlights disaster management and climate change among the cross-cutting themes to be addressed across all pillars of the strategy.

MINALOC is the lead ministry for social protection policy development, coordination and oversight. It chairs the Social Protection Sector Working Group, set up to coordinate the activities of government and non-government actors. It oversees several semi-autonomous agencies that deliver social protection programmes, the most prominent being LODA, which manages

⁴ Other hazards identified in the policy include, among others, famine, pandemics, crop and animal epidemics, volcanic activity, terrorism and mass movement of the population.

the VUP. Other ministries responsible for social protection programming include the Ministry of Gender and Family Promotion, for social care services; MINECOFIN, for contributory social security (delegated to the Rwanda Social Security Board); and MINAGRI, which provides or subsidises assets for rural households.

The delivery of social protection programmes is largely the responsibility of districts and sectors, which carry out interventions in accordance with national guidelines. Their tasks include recruiting programme staff, selecting beneficiaries, case management, coordination of interventions, handling feedback and complaints, communication and reporting. Funding for these activities is allocated to the districts from the central government budget.

The budget allocation to social protection stood at RWF 138 billion for 2018/19, constituting a 5.7% share of the government budget (UNICEF, 2018). Some RWF 60 billion of this was allocated to VUP and other family support programmes, and the Ubudehe targeting system. Health insurance subsidies amounted to RWF 36 billion, with most of the rest going to nutrition support and to FARG, the fund for support to genocide survivors. A small share, of less than RWF 2 billion, was committed to disaster management and support to returnees (UNICEF, 2018).

Access to social protection programmes, particularly those providing non-contributory social assistance (cash and in-kind support), is often contingent on a household's status under the Ubudehe system (see section 5.4). This home-grown, community-based system of classifying citizens according to their socioeconomic status is deeply rooted in Rwandan history and, 'to a large extent, it determines the politics of who gets what and how at the grassroots level' (Ezeanya-Esiobu, 2017, p. 14). A reform of the Ubudehe classification in 2015 resulted in a four-tier system, whereby 1 denotes the poorest and most vulnerable households, and 4 denotes the better off. Eligibility for many types of support in social protection, education and health—including much of the VUP—is confined to households in category 1. The system is under review.

4.3. Key social protection programmes

4.3.1. VUP

The VUP is one of the government's core social protection programmes. Since its establishment under MINALOC in 2008 it has expanded its coverage and scope considerably, and has progressed through several revisions of its design. It is now expected to be an important contributor to the government's goals of reducing extreme poverty and strengthening household resilience: its two main intended outcomes are defined as, 'Sustained graduation of beneficiaries from extreme poverty', and, 'Enhanced resilience of beneficiaries to moderate shocks' (LODA, 2019, p.46).

The VUP's complex structure of core and complementary interventions now comprises three components: (i) Safety net component (ii) Livelihoods enhancement component (iii) Sensitisation and public communication. These are further divided into several instruments, as per the 2019 programme document:

1. **Safety Net.** Income support for the poorest households, via four instruments:

Direct Support: Unconditional income support for extremely poor, severely labour-constrained households;

Nutrition-Sensitive Direct Support: Income support for extremely poor households containing pregnant women and/or infants at risk of malnutrition;

Expanded Public Works: Year-round, multi-year, public works employment for moderately labour-constrained, extremely poor households (with a focus on female-headed households caring for young children);

Classic Public Works: Short-term employment on labour-intensive public works for labour-endowed households.

The Safety Net component reached around 240,000 households in 2017/18 (World Bank, 2019).

2. **Livelihoods Enhancement.** This consists of:

Financial services: Microcredit, as well as financial education and support for accessing insurance;

Asset transfers: Grants of small livestock, agricultural inputs or small-scale equipment, to households who have participated in VUP Public Works;

Skills training: for the acquisition of technical or vocational skills.

3. **Sensitisation and public communication.** These activities aim to inform beneficiaries and communities about their rights and responsibilities under VUP, and the programme's objective and impacts, as well as to facilitate access to economic opportunities and services, and build understanding of issues that may contribute to sustainable improvements in well-being.

4.3.2. Other social and emergency assistance programmes

While the VUP remains the most prominent social protection programme—particularly for Rwanda's development partners—it is not the only one relevant to a review of the shock-responsiveness and climate-sensitivity of the sector:

- **MINEMA**, in close collaboration with districts and sectors, distributes in-kind short-term / emergency assistance to households in need following rapid-onset shocks, in the form of materials such as iron sheeting to replace roofs lost in storms;
- The largest social protection scheme is the **Community-Based Health Insurance** programme, reaching some three-quarters of the population (NISR, 2018a). The government subsidises premiums for households in Ubudehe category 1;
- Direct support, and assistance with shelter, education and health, as well as support for income-generating activities, is provided through the **Genocide Survivors Support and Assistance Fund (FARG)** and the **Rwanda Demobilisation and Reintegration Commission (RDRC)**;
- The **Girinka** programme, managed by the MINAGRI, has provided a cow to about 380,000 households since 2006, to increase the assets of poor rural households and provide an additional source of income;
- MINAGRI organises an early drought response with food distributions from the **National Strategic Grain Reserve**, which purchases maize and beans from farm organizations for a decentralised storage network at the district and sector level and initiates distribution to households when villages and cells report impacts in the aftermath of a shock, such as a drought;

- MINAGRI launched the **National Agricultural Insurance Scheme (NAIS)** in April 2019 to provide livestock and crop insurance to smallholder farmers with premiums that will be subsidised by the government up to 40%, with farmers paying the remaining 60%. The first crop insurance was introduced during season A of 2019-2020 and covers maize and rice. More than 1,000 cows and more than 2,500 hectares of crops, primarily rice, were insured; and
- The **input subsidy pillar of the Crop Intensification Programme (CIP)**, an agricultural development programme, may be considered a contribution to social protection insofar

as some of the inputs are subsidised to a greater extent for households in lower Ubudehe categories. Starting in 2007 and implemented country-wide since 2010, the CIP increases access to hybrid seeds, fertilizer and extension services for smallholder farmers while incentivizing land consolidation and production of export-oriented crops. Smallholders receive a subsidized input package for consolidating landholdings with neighbours to cultivate government mandated crops (wheat, maize, rice bean, cassava) based on regional agroecological characteristics.

PART C: ANALYSIS

5. Improving climate-sensitivity and shock-responsiveness: the social protection system

We noted in section 2.2.4 five dimensions of a social protection system (i.e. not counting programmes) that contribute to determining the contribution of the sector to addressing hazards: policies and strategies; institutional arrangements and coordination; financing; support systems; and M&E. Here we review achievements to date in each dimension, identify its contribution to disaster risk reduction, absorption and transfer, and indicate some areas of interest for further exploration. Table 3 at the end of this section summarises the actions presented.

5.1. Policies and their coherence

To be sustained, the link between DRM and social protection must be embedded in policy from national to local level: and indeed, we find this articulation in many documents, from the National Strategy for Transformation downwards. That document makes the link explicit: disaster management and climate change are cross-cutting themes, and social protection is cited as a means to improve households' resilience to shocks. The National Strategy for Transformation's approach to DRM includes priorities such as a commitment to improved coordination to enhance information-sharing and joint delivery of interventions; and strengthened capacities for weather forecasting and early warning systems for informed decision-making. It perceives the role of social protection in all three aspects of risk reduction, absorption and transfer. It prioritises a nationwide rollout of the VUP Expanded Public Works, and proposes refocusing the VUP Classic Public Works to locations most at risk of seasonal and climate-related shocks. In addition, it advocates the introduction of an agricultural insurance scheme—since implemented as the NAIS, which provides social protection for households engaged in agriculture and will facilitate access to financial services while supporting smallholders in managing risks to their livelihoods from climate shocks.

The link continues in many of the social protection policies, where promoting resilience to climatic shocks is often a core objective. Both the National Social Protection Policy and the Social Protection Sector Strategic Plan note the contribution of climatic shocks to poverty and vulnerability, and commit to addressing them. The latter highlights that household resilience to shocks is low, and that exposure to environmental shocks, among other factors, 'has resulted in highly dynamic consumption among Rwandan households as a whole and among households at the lower end of the consumption distribution in particular' (MINALOC, 2017, p. 21).

With one pillar of the Social Protection Sector Strategic Plan being the provision of emergency assistance, and one strategic objective being to, 'strengthen support for households and communities affected by disasters and shocks', the case for shock-responsive social protection is already well made. The plan articulates five objectives to support disaster risk reduction and absorption, including,

'Providing income support to a significant proportion of the poor and vulnerable population ... [to] enhance the capacity of these households to cope with shocks and re-establish productive activities after a shock has occurred; [...] integrating disaster risk reduction into social protection sector's community sensitisation activities; ensuring the

timely provision of emergency assistance to households affected by disasters to mitigate impacts.' (MINALOC, 2017, p.38).

It briefly refers to actions for risk transfer, mentioning the possible expansion of access to crop, livestock and/or weather-indexed insurance products for smallholder farmers.

The national policies on DRM, climate change and the environment are less explicit about the role of social protection. Nonetheless their views and objectives are in keeping with the aspirations of the social protection sector with respect to promoting climate change adaptation, mitigation and response. The National Drought Contingency Plan favours early and/or anticipatory action, and intends to promote linkages with long-term development activities as a route to enhanced resilience and reducing the loss of assets. It mentions in passing that social protection may have a role, though does not detail what this might look like. It recognises 'national relief programs' in the form of food distributions as essential for early recovery from drought.

Rwanda is therefore not short on policy backing for climate-sensitive and shock-responsive social protection. We explore further in this and the following chapter the extent to which policy commitments are translated into tangible resources and actions that alleviate vulnerability to shocks and strengthen resilience of affected people.

We highlight two policy conundrums that may merit attention:

1. **Implications of life-cycle and poverty-targeted approaches.** Social protection interventions justifiably address household needs prompted by many causes, as per the Sector Strategic Plan: 'Social protection helps stabilise assets, incomes and capabilities in the face of a wide range of life-cycle, economic and environmental shocks' (MINALOC, 2017, p.10). The life-cycle approach directs assistance to individuals at stages in their life when their needs might be above average, such as children, older people or people with disabilities. An economic approach might target poor households. A shock-focused approach is targeting a third group, those at risk from climate shocks. The Sector Strategic Plan reveals the policy dilemma between the life-cycle versus the poverty-targeting approach. It states that, 'the gradual development of a [...] life-cycle based social protection system [is] the first priority of this strategy' (MINALOC, 2017, p.26). This is at odds with the government's widely expressed intention to focus on 'graduation from extreme poverty'. The key issue is that those facing life-cycle vulnerabilities are not necessarily the poorest and while shock-affected households may be poor or face life-cycle vulnerabilities, there is not a total overlap between the three. It is possible—even desirable, to improve coverage and comprehensiveness—to have programmes that support the three objectives. However, the trade-offs must be acknowledged. Also, the indicators against which success is measured need to be carefully chosen—extending beyond, perhaps, purely a reduction in the extreme poverty headcount (see also section 5.5).
2. **Evolution of VUP Classic Public Works.** One vision for adjusting the climate-sensitivity and shock-responsiveness of the VUP Classic Public Works scheme is represented in the Social Protection Sector Strategic Plan, which proposes that the scheme will be, 'refocused as a shock-responsive safety

net', to be cut in size from around 150,000 households to around 50,000 households, concentrating on areas most at risk of seasonal and climate-related shocks (MINALOC, 2017, p.27 and p.45; see also section 6 below). However, other policy documents offer alternative visions. The VUP Programme Document proposes to *expand* VUP Classic Public Works to nearly 250,000 households in all 416 sectors by 2023 (LODA, 2019, p.27), and to prioritise the rollout to sectors with either the highest number of households in Ubudehe category 1, or the greatest proportion of extremely poor households (p.31). The respective options meet different objectives. It will be valuable to consider how to reconcile these differing visions for the future of VUP Classic Public Works, and especially whether it is to be increased or reduced in scale.

5.2. Institutional arrangements and coordination

Decentralised entities are at the core of service delivery in social protection and DRM. Over the last 20 years Rwanda has undergone a major process of decentralisation in several phases, leading to a structure of four provinces plus Kigali city, 30 districts and 416 sectors (subdistricts). A recent phase of restructuring, around 2015, created District Directorates of Social Development, led by a director, as well as the post of District Disaster Management Officer. At district level the vice-mayor for social affairs plays a key oversight role, while, at sector level the Sector Social Affairs Officer takes the lead. The location of responsibility for social protection in the ministry for local government underlines the importance of local entities for this area of work. Local authorities implement the VUP and Girinka, and identify the need for—and deliver—emergency assistance. They promote activities that encourage 'graduation', such as support to cooperatives. They also conduct sensitisation and awareness-raising activities. Maize and bean storage for the National Strategic Grain Reserve has also been decentralized to the sector level, with procurement of the food stocks from local smallholder farmers that ensures distributions can be mobilized rapidly when needed, while also providing a secure output for surpluses and ensuring food security in regions impacted by climate shocks. These activities may be seen to contribute to both risk reduction and absorption. Local authorities do not run risk transfer schemes, which are better aggregated at a national level: they do not implement the NAIS (overseen by MINAGRI) or the Community-Based Health Insurance Programme (run by the Rwanda Social Security Board).

In any country, decentralisation brings both benefits and trade-offs. In theory, decentralisation allows for budget allocations and service delivery to better reflect local realities; and it can make officials more directly accountable to their local population (Chemouni, 2017). By the same measure it may result in a more variable quality of service delivery, dependent on local capacities and resources. A functional review of local service delivery for social protection is outside of the scope of this study, but we note that:

- Our respondents highlighted that the decentralised structure facilitated coordination between social protection, DRM and others, who often work closely together. A synergy that might be more easily achieved locally than at national level might be, for example, a hypothetical closer coordination between infrastructure projects and VUP Classic Public Works activities.
- Actual staffing capacity varies across districts. In at least one district the District Disaster Management Officer post is vacant, and the job is absorbed by the Director of Social Development; while in another the reverse is true. In practice this means that any debate about 'which agency' should lead

on shock-responsiveness may be redundant, since it may be the same person on the ground. However, this also implies that staff need technical capacity to operate in matters related to both disaster management and social protection or development and that workload may peak in times of shock. The VUP Programme Document notes that, while staffing challenges are being resolved, there may be merit in simplifying processes to lessen workloads, e.g. automation of payments:

'Serious consideration will need to be given to increasing social protection staffing at Sector and Cell levels over the medium term and continual assessment shall be conducted to ensure that VUP does not create an administrative burden on Local Governments. This assessment could include how payments can be automated to enhance payment delivery mechanisms.' (MINALOC, 2019, p.21)

- Local technical and financial capacity also necessarily determines the quality of programming—such as the effectiveness of procurement for, or the quality assurance of infrastructure under, VUP Classic Public Works—as well as the feasibility of implementing District Disaster Management Plans. For example, districts may have resources to conduct periodic reporting on disaster response, but not to implement year-round disaster risk mitigation activities.
- MINEMA recognises that its role is to oversee and coordinate DRM actions undertaken at local level, but also that some disasters will exceed the capacity of the local authorities to respond and will need to be addressed differently.

National staffing capacity faces some of the similar constraints to those at local level. In particular, the VUP has undergone a huge transformation over the last two or three years, with the introduction of many new subprogrammes and components such as Nutrition-Sensitive Direct Support, Expanded Public Works and others. The VUP Programme Document notes that, for these demands to be accommodated effectively, a priority is to strengthen the capacity of LODA and others to deliver its functions accordingly (MINALOC, 2019). Meanwhile, in the DRM sector, respondents indicated that MINEMA's experience is greater in responding to rapid-onset emergencies such as floods, than on slower onset events such as droughts.

National-level coordination mechanisms (such as the Social Protection Sector Working Group) assist cooperation among national and international partners on issues of DRM in social protection. Interest in improving the shock-responsiveness and climate-sensitivity of social protection was expressed broadly across our respondents for this study. International agencies are supporting the agenda to differing extents, depending naturally on both the global positions of their organisations and their priorities in country. For example, DFID's current plan includes a focus on shock-responsive social protection, while the World Bank's social protection programme places a greater emphasis on promoting connections between social protection, human capital development and nutrition.

5.3. Financing

Government spending on social protection has been steadily expanding. In 2019/20, the Government of Rwanda allocated RWF 187.1 billion to the social protection sector, up from RWF 141 billion in 2018/19, which reflects an increase of 33% in nominal terms. The social protection budget as a share of the total national budget increased from 5.7% in 2018/19 to 6.5% in 2019/20. Social protection sector allocation also stands at about 2.2% of national GDP (UNICEF, 2019). About 54% of the social protection budget is domestically financed by the Government

of Rwanda. The Netherlands, DFID, the World Bank, the German Development Bank (KfW) and UNICEF are the main development partners in the sector.

The bulk of social protection sector allocation (43%) in 2018 was through MINALOC, while 23% was through local governments. Only 4.6% of the social protection budget is allocated through MINEMA (UNICEF, 2019), which is responsible for emergency response. This flags the existence of some cross-linkages between these sectors and justifies the need to strengthen collaboration to leverage social protection funding for an efficient and effective shock response.

These routine social protection budgets are useful for the day-to-day functioning of the system and its programmes. They can support planned risk reduction activities, and the types of risk absorption activity that build resilience even in the absence of a shock. They can include the subsidies for the premiums paid on behalf of the poorest households for crop and livestock insurance products, for risk transfer. They should also be sufficiently well resourced to be able to accommodate the fluctuations in need arising from relatively small-scale, even if frequent, shocks. Additional arrangements and budget are required to deal with rarer, larger shocks.

An important element of whether a social protection system can be more responsive to the latter type of shock relates to how it is financed, to what extent, and the scope for allocating additional funds towards it for a response. (O'Brien et al, 2018). Sources of financing for DRM can include global relief pooled funds and preparedness funds; contingency funds or contingent credit lines; insurance; or catastrophe bonds.

A Disaster Response Fund was established by law in 2015, under MINEMA, but is not yet functional. Its aim had been to solve two issues, relating particularly to the occasional instances when it seeks assistance for disaster response from development partners (which is not the norm: the government mostly undertakes much of its emergency management by itself). (1) Previously, when the government has sought funds from development partners to augment its own response to the occasional large-scale emergencies that do exceed its regular capacities, it has had to request the funds at the time of the emergency, resulting in delays in mobilizing an effective disaster response. (2) Donors sometimes earmark funds for a particular sector e.g. for water and sanitation, which limited their flexibility; a general disaster fund holding contributions from government, donors and donations might allow more flexible use of resources. After the declaration of a level three or a level four disaster, MINECOFIN can authorize the use of the fund upon the request of MINEMA; however, it is still not clear what the current status of the fund is or whether it is fully funded with the RWF 1 billion as originally intended. A widespread challenge with such funds worldwide is to find an acceptable funding model, given the variability in disasters from one year to the next. Decisions need to be made as to whether budget allocations that are unspent in a 'good' year can be rolled over to the next, and about how to set the budget. Otherwise resources may end up being released into the fund when and if the need arises. More information and analysis will be required to determine how to fully operationalise this type of fund in the Rwandan context and how the funds might be disbursed, which could include a response through social protection

Sovereign risk pooling schemes, such as the national-level insurance coverage offered through Africa Risk Capacity (ARC) Limited, are another potential climate risk financing mechanism that can provide funding for shock responses. Through pooling risk across multiple countries across the continent, ARC allows countries to manage climate risk as a group, in a financially efficient manner, pooling many country

level policies covering diverse climate risks. ARC coverage is currently limited to only certain types of drought hazard; however, the agency is developing products that will cover additional hazards, such as flooding and tropical cyclones, as well as droughts affecting pastoral communities. The Government of Rwanda has signed a memorandum of understanding with ARC and has formed a technical working group that is customising indices. However, there are indications of potential challenges considering Rwanda's substantial geographic rainfall variability.

This insurance coverage allows for governments to respond to climate hazards with pre-defined contingency plans and prevents funds for responses from having to be diverted from national budgets or development programs. This means that, for the government, it is a risk transfer mechanism; but if the government receives a payout, it can use the funds on a wide variety of pre-defined schemes including for risk absorption or risk reduction at the household or community level. In other countries, governments have used ARC payouts to scale up cash transfers, subsidize livestock feed, replenish depleted food reserves, and distribute emergency food supplies in response to drought.

The impact that social protection interventions achieve in supporting populations in their recovery from disasters or climate-shocks depends on the timeliness of when assistance is received. Evidence suggests that anticipatory actions before a forecast hazard or early response mechanisms that provide assistance shortly after a disaster materializes can reduce the recovery time after a shock as well as reduce the number of people that are driven into poverty or food insecurity.

Anticipatory actions, however, require that the hazard can be predicted with reasonable accuracy. They also require that sources of climate risk financing are established in advance that can provide predictable funding at the moment when it is needed. An approach known as 'forecast-based finance' attempts to make this link between funding and programming. It does not answer the question of where the funding might come from; rather, it shapes two vital decisions: when the money is triggered, and what it will be used for. So, once the funding source is known, it links extreme weather forecasts to guaranteed financing mechanisms and pre-agreed contingency plans that can avoid disaster losses and reduce the cost of post-disaster responses. If the Disaster Response Fund were to establish a way of obtaining funds, it could be worthwhile to explore whether this approach might be relevant for triggering release of those funds when needed.

It is not yet clear to what extent this approach would be feasible in Rwanda, given the highly localised and small-scale impacts of hazards as described earlier:

- **Regarding the trigger,** funding for anticipatory actions might be triggered on the basis of Meteo Rwanda's early warning system, for predictable hazards for which reliable forecasts are possible. A MeteoRwanda project is being implemented with UNDP to strengthen the early warning system. An assessment of MeteoRwanda's current capabilities in predicting the diverse hazards and their highly localized impacts would determine which hazards can be predicted accurately and how anticipatory actions can be implemented.
- **Regarding the response triggered by the alert,** this could be a disaster preparedness activity by a local authority; it could also be a social protection response to households, if those affected can be identified in advance. For localised droughts, it may not prove feasible to accurately predict which sectors will be most affected, in order to implement anticipatory actions, although a 'no regrets' approach could be adopted, covering sectors most likely to be at risk. For

rapid-onset shocks such as floods or storms, it may be worth exploring the potential for using short lead time forecasts to trigger preparedness actions such as funding for the temporary resettlement of households in high-risk zones. Moreover, MINALOC could explore whether or not social protection assistance directly to households could feasibly be triggered by the multi-hazard warnings produced by this system.

5.4. Support systems

5.4.1. Databases

The main system that serves multiple programmes in social protection—and beyond—is the Ubudehe classification of households, used for targeting (section 4.2). We noted above that membership of Ubudehe category 1, those households classified as the poorest, is a prerequisite for eligibility for many programmes, including several elements of the VUP. Some of the programmes for which the Ubudehe system is used have enormous financial value, such as, until very recently, full scholarships for higher education. Therefore, there is now perceived to be weakened incentive for households to ‘progress’ from category 1 to 2 and so on, when the benefits lost at each stage are considerable. This is not so much a challenge with the classification itself—though that, too, is noted in some quarters for being insufficiently correlated with consumption poverty—as with its *use*. Consultations on its revision are underway.

The debate about whether to focus assistance on households in Ubudehe category 1 has been live also in social protection, and for the VUP in particular. The highly dynamic nature of poverty in Rwanda, together with the government’s focus on ‘graduation’ and self-reliance, justify attention also to those in Ubudehe categories 2 and 3, as some respondents advocated. This is compounded when one takes shock-responsiveness into account. By definition, households in categories 2 and 3 are likely to own some assets; if they lose or sell these during a shock then, again by definition, one would expect them to drop into category 1. Interventions that support the accumulation of assets, or help prevent their loss, may provide a greater buffer in the case of an adverse event.

There is a process for households’ Ubudehe status to be reassessed when their personal circumstances change. Respondents indicated a time-lag of about a year, as the request comes from the community level and works its way up through review and approvals at all levels of local and central government. This suggests that, at present, the reclassification of households is not fast enough to allow immediate inclusion into VUP and other programmes of shock-affected households. Recognising this lag, the VUP Programme Document proposes the inclusion in VUP Public Works not only of households in category 1, but also,

‘Households in higher Ubudehe categories that have suffered a severe socio-economic shock which has temporarily placed them in a similar situation to households in Ubudehe category 1’ (MINALOC, 2019, p.31).

Although such inclusion is important, it was not clear to the team to what extent this flexibility occurs. Some respondents expressed hesitation that it might be interpreted as ‘bending the rules’ or favouritism. Exploring a faster reassessment process may enhance household access to social protection support in case of a shock.

Meanwhile the government is at an early stage of exploring possible alternatives to the Ubudehe scheme for targeting social protection. No decision has yet been made. Options

on the table include the results of a census-style household profiling exercise that LODA has been running with the National Institute of Statistics Rwanda, or a ‘social registry’ of the sort now promoted in many countries (of which the Ubudehe is, in fact, a home-grown variant that long pre-dates their current global popularity). The household profiling exercise was not designed to be used for targeting social protection interventions, and it is not yet clear if it contains the requisite information. The government has been developing management information systems (MISs) for the VUP, FARG and RDRC, and, with World Bank assistance, has been developing the infrastructure to create an integrated MIS, promoting interoperability of the programme databases, Ubudehe database and national ID database with the objective of improved coordination and complementarity among programmes (World Bank, 2019).

Many countries are exploring whether databases that contain geographic, demographic and/or socioeconomic data on much or all of the population might offer a basis for selecting beneficiaries to receive support when a shock occurs. In the case of Rwanda, this step may not be necessary, since it tends to be of most value when multiple *international* agencies wish to support populations after a shock without knowing which precise households have been affected: variables in the database can be used as proxies for determining who is likely to have been affected or merits support. Rwanda has three advantages which may render this process redundant. First, emergency response is mostly handled by the government, so there is less risk of multiple agencies needing to identify shock-affected households. Second, the highly localised nature of weather-related shocks means that sometimes just a handful of households are affected: a static database will not be able to declare which households those are. Third, decentralisation means that there are local authority entities who are located very close to affected populations and who *are* in a position to identify these households. Such databases may be of more use to estimate numbers of households likely to require assistance in instances of shocks that are widespread across a clearly defined geographical area, such as a drought.

We highlight the following:

1. While awaiting decisions on the continued use of the Ubudehe system for targeting social protection, it is worth exploring either expediting the process of reclassifying households who suffer substantial losses after a shock, or waiving the criterion for belonging to a certain Ubudehe category when assisting shock-affected households.
2. While various forms of registry / database / information system are being discussed, it could be useful for the government and its partners to review experiences from other countries, and familiarise themselves with analyses of how social protection programming is affected by the database design. These include e.g. guidance on the difference between social registries and integrated beneficiary registries (Barca, 2017); the recent report of the UN Special Rapporteur on human rights, reviewing digital technology in social protection (Alston, 2019); and a briefing note on factors affecting the usefulness of social protection databases in emergency preparedness and response (Barca and O’Brien, 2017) (Box 3). The global social protection community is also drafting a tool to assess the quality and capacity of information systems for social assistance, as a technical group under the umbrella of the Interagency Social Protection Assessments (ISPA).

Box 3. Design parameters of social protection databases, and their relevance for emergency preparedness and response

Many social protection interventions hold data on the households or individuals they support. Sometimes information is also collected about a wider population, including potential future recipients. The nature and quality of social protection databases and information systems is so varied that it is meaningless to ascribe a generic role to their use in emergencies: such a role can only be identified with reference to the particular database(s) and shock context(s).

Seven design parameters that influence what this role might be, either for routine social protection or in a shock, are: (1) **Completeness**—How many households or people are listed (2) **Relevance**—What variables are held on each household / person (3) **Accuracy**—The extent of errors during data collection and data entry (4) **Updating**—The degree to which the data are kept up to date, reflecting current circumstances (5) **Data protection**—Protocols in place for protecting personal data (6) **Accessibility**—Who has access to the data, and how (7) **Cost**.

There are trade-offs between all these: it is impossible to maximise the quality of all seven dimensions at once. In particular, there is a trade-off between the first two and the other five. The more information that is held on the more people, the harder and/or more costly it is to collect and maintain accurate and up-to-date data, and the greater the data protection risks.

So, there is no single right answer as to what a 'good' database should look like. There are only policy choices. For example, one option might be to maintain a smaller database with high quality data on programme beneficiaries, being cheaper and easier to update and posing fewer protection risks than a large database containing a lot of information on many people, but with the trade-off that additional information may need to be collected at short notice if implementers require different data. Note that the trade-offs go beyond the database alone: the more money that is spent on a database, and the more human resources are devoted to maintaining it, the less may be available for other aspects of social protection delivery.

Source: Based on Barca and O'Brien (2017)

5.4.2. Savings and Credit Cooperative Societies (SACCOs)

Linking financial services with cash transfer programmes has the potential to strengthen resilience to shocks. VUP payments are delivered through SACCOs, which are located at every sector, though not in every cell. Ideally, SACCOs promote greater financial inclusion, and resilience—by promoting savings for hard times, and improving creditworthiness. Without evaluating the impact of SACCOs on VUP beneficiaries, it is hard to determine if these positive outcomes have been realised. These benefits could, however, be harnessed to promote the ability of households to absorb shocks.

A project to further digitise the VUP payment process is underway. Actions such as digitising the payroll, automating the allocation of funds to beneficiary accounts when it arrives in the SACCO, and informing beneficiaries that the payment is ready—should all improve the efficiency of the VUP, speeding up the payment process and increasing its reliability.

5.5. Monitoring and evaluation

Effective delivery of a social protection system that is climate-sensitive and/or shock-responsive in Rwanda requires effective M&E, made through the careful selection of appropriate and robust indicators. This is because of the strongly results-oriented system of service delivery and management, characterised by annual performance contracts (*imihigo*) for post-holders and departments throughout government: priority is given to meeting targets agreed in the *imihigo*. The choice of indicators depends on context, existing data, and monitoring activities. For cross-sectoral issues such as those discussed here, there should be consideration of harmonising indicators across interventions and sectors (social protection, DRM and others as relevant).

The M&E system for social protection comprises three elements: regular monitoring, periodic evaluations, and specially commissioned analytical pieces (MINALOC, 2017).

In respect of monitoring, it is encouraging that strategic interventions and outcomes in the Social Protection Sector Strategic Plan include references to both climate-sensitivity and shock-responsiveness (MINALOC, 2017). They are explicitly aligned to related outcomes in the National Strategy for Transformation (Table 2).

The indicators to measure progress against Outcome 3 as per the table include one for measuring its contribution to risk reduction, and another for its contribution to risk absorption, namely:

- Percentage of VUP Classic Public Works expenditure contributing to disaster risk reduction. The target is to reach 50% of Classic Public Works expenditure for disaster risk reduction by 2023/24
- Number of households in crisis provided with other short-term social assistance (temporary financial assistance, shelter, health fees, NFI distribution etc). The target is to reach 4000 households with financial assistance by the end of the strategic plan period (2023/24) (MINALOC, 2017).

Table 2. Interventions and outcomes for improved climate-sensitivity and shock-responsiveness of social protection

Social Protection Sector Strategic Plan		National Strategy for Transformation		
Strategic intervention	Related outcome	Outcome	Priority Area	Pillar
Strengthen climate-sensitivity and shock-responsiveness of VUP Classic Public Works	Outcome 3: More effective social protection response to shocks and crises	2.1.1 Increased graduation from extreme poverty and enhanced resilience to shocks	2.1 Enhancing graduation from extreme poverty and promoting resilience	2 Social transformation
Strengthen the implementation of District Disaster Management Plans				
Strengthen short-term assistance to families in crisis				

Source: MINALOC (2017), p.34.

The targets of the National Strategy for Transformation and the Social Protection Sector Strategic Plan are translated into annual targets by the Social Protection Sector Working Group, as part of its process of twice-yearly joint sector reviews (one backward-looking, one forward-looking). In 2018/19 the intermediate indicator that related to the outcomes cited in Table 2 above was a target of 25% of VUP Classic Public Works expenditure contributing to disaster risk reduction¹.

We envisage that it may prove challenging to classify Classic Public Works activities as either counting or not counting towards the 25% (or 50%) target. It implies a yes/no distinction between works that contribute to disaster risk reduction and those that do not. In practice, the situation is more nuanced. While some activities such as tree planting and terracing may be confidently classified as being for disaster risk reduction, even road maintenance—a large proportion of Classic Public Works activities—can be done in a way that contributes to the reduction of disaster risk, such as by the inclusion of drainage channels. If the method for calculating this indicator have not yet been established, it may merit further discussion. Moreover, the decision as to whether Classic Public Works are to be expanded or reduced (see section 5.1) will have an impact on the contribution of the VUP to risk reduction: if the number of projects is cut, the total contribution may decline even if the percentage share rises.

We have noted throughout the study that a key factor for shock-responsive social protection is simply the effective implementation of the routine social protection programmes year-round, regardless of any shock. This builds households' resilience and enables them to absorb shocks that occur, be they environmental or personal. The VUP recognises this, in that one of its outcomes is, 'Enhanced resilience of beneficiaries to moderate shocks', and it is to be measured by creating a coping strategies index, which will cover asset ownership, savings, access to credit and livelihood diversification in addition to access to external support in times of hardship (LODA, 2019). The proposed index sounds relevant for assessing this component of risk absorption.

An important question remains unresolved in relation to monitoring progress in using social protection for DRM: Is the very existence of social protection viewed by the government as a positive or negative marker of household vulnerability? In many contexts the fact of a household participating in a social assistance programme is viewed as a positive contribution to risk absorption. In Rwanda, where there is a very heavy emphasis on reduced vulnerability being defined by a household's exit from social assistance, targets are orientated towards reducing, rather than increasing, the number of people being assisted. It will be important for this nuance to be captured in the coping strategies index mentioned above, so as to count positively the people who no longer receive assistance because they have achieved self-reliance, without promoting the removal of support from people who have not yet reached that level of resilience. We note that REMA's Climate Change Vulnerability Index for Rwanda includes participation in the community-based health insurance scheme as a marker of reduced vulnerability, which makes sense given that the importance of including as many people as possible on that scheme is recognised.

Finally, we note that several standard measures of poverty exist globally. The poverty headcount (percentage of the population below a certain threshold)—widely used in Rwanda—is one common measure. Another, which might be usefully considered as a way of measuring households' progress towards improving their resilience, might be the squared poverty gap. This looks at *how far* below the poverty line poor households are. Two countries with equal poverty headcounts may differ greatly in their poverty gap: in one, poor households might be very close to the poverty line while in another they may be much further below the line. This indicator might offer an additional tool for measuring the effectiveness of the VUP: it means that if the programme succeeds in reaching the extremely poor, and enabling them to become less poor, the change can be observed and recorded even if the household have not yet reached the status of non-poor.

¹ The production of the present report is intended as a contribution to that target.

Table 3. Interventions and outcomes for improved climate-sensitivity and shock-responsiveness of social protection

Element	Actual contribution	Options to consider
Policies and their coherence	<ul style="list-style-type: none"> National planning documents clearly and consistently highlight relevance of social protection in DRM Social protection policy documents spell out the relevance of social protection to DRM, consistent with the national planning documents and with one another 	<ul style="list-style-type: none"> Enhance the articulation of social protection considerations in DRM policy documents Clarify how the potential greater use of social protection for DRM (with consequences for e.g. targeting, as per the documents) can be achieved in a way that is compatible with efforts at both increasing the emphasis on a life-cycle approach to social protection targeting, and the effort to focus on graduation from extreme poverty Clarify the intended direction of evolution of Classic Public Works (to be refocused on areas at risk of climate-related shocks; or to be expanded to achieve greater geographical coverage?)
Institutional arrangements and their coordination	<ul style="list-style-type: none"> Close collaboration between social protection and DRM at district level National-level coordination mechanisms assist cooperation between the government and its international partners on linkages between DRM and social protection 	<ul style="list-style-type: none"> Analyse actual technical and financial capacity to deliver social protection and DRM at district level, good practices, gaps Explore further synergies between DRM and social protection in local development and contingency plans.
Financing	<ul style="list-style-type: none"> Government expenditure on social protection is increasing Conversations are underway between the government and ARC to explore whether its insurance mechanism can serve as a feasible risk transfer instrument for drought 	<ul style="list-style-type: none"> Consider further how the Disaster Response Fund will be funded and operationalised After having clarified how the Disaster Response Fund will be funded, explore whether or not it might be feasible to release some of the funds for 'early warning, early action' responses, i.e. triggered by indications of imminent shocks rather than only after the shock. (This is dependent on whether Rwanda's very localised hazards can be predicted accurately)
Support systems	<ul style="list-style-type: none"> Ubudehe system provides a comprehensive estimate of the well-being of all households in Rwanda Ubudehe system is under review with a view to further improvements Decentralised local authorities are close to their populations and often able to identify those who have been affected by localised shocks through their on-the-ground knowledge, without recourse to a database 	<ul style="list-style-type: none"> Consider whether a faster reassessment process for a household's Ubudehe classification (currently annual) may enhance household access to social protection support in case of a shock or enable disaster response to be provided in a manner not restricted to a certain ubudehe category. While revisions of the Ubudehe system are being discussed, review global experiences with registries for social protection and the way that their design affects their use
M&E	<ul style="list-style-type: none"> Strong results-oriented system of service delivery Monitoring indicators for social protection include references to climate-sensitivity and shock-responsiveness 	<ul style="list-style-type: none"> Review the indicator that seeks to measure the contribution of Classic Public Works to DRM, to check whether it is still appropriate once the future direction of the Classic Public Works programme is determined as above (i.e. whether it is intended to expand or shrink) If the indicator remains relevant, clarify how the indicator that seeks to measure the contribution of Classic Public Works to DRM is to be calculated Clarify whether or not the fact of being a social protection recipient is viewed as a positive contribution to resilience-building, and reflect this in the proposed coping strategies index Consider using the (squared) poverty gap as a measure of progress in poverty reduction in addition to the poverty headcount, in order to better capture how even small-scale social protection interventions may be contributing to a reduction in the depth of poverty

Source: Authors.

6. Improving climate-sensitivity and shock-responsiveness: social protection programmes

We now consider the current and potential contributions of the specific social protection programmes—particularly VUP and the one-off emergency assistance, but also Girinka, crop and livestock insurance and others as per section 4.3.2. Rwanda's social protection programmes are either already helping people to reduce and manage shocks, or have the potential to contribute through small tweaks in their design or implementation. Table 4 at the end of this section summarises the actions presented.

6.1. Reducing risk: Addressing exposure to shocks

Several elements of the VUP can contribute to disaster risk reduction. The VUP Classic Public Works is most directly relevant, while the VUP Direct Support and VUP Sensitisation and Public Communication component can play a modest supporting role.

6.1.1. VUP Classic Public Works

A climate-smart portfolio of VUP public works projects offers the potential to contribute to reducing the exposure of households to location-specific shocks. Through mapping and prioritizing the hazards in the provinces and districts that have the highest risks, Expanded and Classic Public Works beneficiaries can be incentivized to engage in activities that reduce these risks for the community. This includes restoring forests in highland slope areas to reduce the risk of floods, soil erosion and landslides in addition to drought. Embankments, terraces, afforestation, and soil conservation projects can help to protect the environment from the adverse impact of climate change. The impact of floods can be minimized by construction and maintenance of drainage systems. Exposure to drought in Eastern province can be reduced through the construction of water conservation and rainwater harvesting infrastructure. Assets might be constructed not only at community level but also on behalf of households. Context-appropriate assets / infrastructure projects, however, need to be selected and implemented in a manner that meets both the social protection objective (contributing to household income), as well as the hazard reduction objective (reducing the likelihood of a hazard). The participation of engineering and environment departments, and quality assurance of assets, may help.

Some of these projects are already being implemented, but it is also quite common to find shock-prone areas focusing their public works entirely on road rehabilitation. So, while building and maintaining roads, particularly after landslides, are important activities that Expanded and Classic Public Works currently promote—and that can also be done in a way that improves their resistance to weather-related shocks—there remain untapped opportunities for increasing community resilience. Projects that have direct objectives to improve climate-sensitivity might also contribute to other national planning goals and policies, including for tree-planting and terracing. For instance, the National Agricultural Policy advocates, 'continu[ing] efforts on terracing while involving the local communities' (MINAGRI, 2018).

Communities are free to choose their own VUP Public Works projects from among the set of interventions for which the VUP is intended to cover. Sectors and districts may have a role in orienting the thinking. A shift in the overall national portfolio of projects may be necessary in order to achieve the VUP's commitment to,

'Ensuring that VUP classic public works are planned and delivered with a view to ... contribut[ing] to efforts aimed at promoting resilience to agro-climatic shocks and support[ing] Disaster Risk Reduction' (MINALOC, 2019, p.24).

This implies a greater emphasis on messaging about the option of using the programme for these climate-related purposes. Relevant actions might include:

- Reviewing the portfolio of projects undertaken nationally by VUP in recent years, to look at trends in the balance between road maintenance and other projects, and understanding the reason for any changes;
- Identifying constraints and/or enabling factors for climate-sensitive projects, e.g. the availability of materials, or staff qualified to design and run the project;
- Considering how, from national and subnational levels, communities can be supported with information, materials etc. that may help clarify the opportunity of using the VUP Classic Public Works for reducing weather-related risks;
- Ensuring that maintenance plans are in place and implemented for the created assets;
- Building the evidence base on the effectiveness of different assets or projects in different contexts and their contribution to risk reduction, and translating this evidence into technical standards to guide design, construction and maintenance.

There is a plan to decentralise planning of VUP Classic Public Works from sector to cell level. This may support communities in prioritising the projects that are most locally relevant (with the added benefit of minimizing the travel time for beneficiaries). However, this will not necessarily translate into these projects increasing resilience in shock-prone areas, unless implemented concurrently with a climate-related VUP Sensitisation and Public Communication component (more below).

VUP Classic Public Works are not the only way to reduce disaster risk. Our respondents highlighted the continued need for infrastructure and agriculture projects requiring skilled engineers to build more technically complex and longer lasting assets. But the VUP can make a contribution. The size of this contribution depends on whether the Classic Public Works scheme is enlarged or reduced, and whether the proposal to refocus it to areas at risk of climate-related shocks is implemented (section 5.1). Changes in farming practices can also reduce risk. The Rwanda Institute for Conservation Agriculture (RICA) was established in 2017 to support agricultural development and training for smallholder farmers, with programmes to reduce risks in the agriculture sector and increase areas under more sustainable cultivation.

6.1.2. VUP Direct Support

Households could potentially use the transfer that they receive under VUP Direct Support to include individual household risk reduction measures. For example, they might adapt planting patterns by cultivating in different areas, in addition to planting trees to protect crops from extreme weather and possibly migrating away from disaster prone locations. Information nudges could be introduced to educate beneficiaries on climate-smart livelihood options they can adopt—without introducing undue conditionalities on how beneficiaries use their VUP income.

6.1.3. VUP Sensitisation and Public Communication

Sensitisation and public communications—the third arm of VUP—is used by different actors to communicate social development messages. The time spent attending sensitisation sessions is already accounted for and compensated as an integral part of the public works transfer. A small implementation tweak would allow actors to educate beneficiaries about shocks and what role they can play in reducing the impact of shocks. Beneficiaries can also, for example, be encouraged to take up activities such as fruit tree planting, which contributes to household nutritional needs, as well as environmental conservation.

6.2. Absorbing risk through two routes: reducing vulnerability, and being ready to respond

6.2.1. Reducing vulnerability

A climate shock can push a marginally poor household into poverty, and a poor household deeper into poverty. Routine social protection, however, contributes in making the poor less vulnerable and more resilient. Resilience is about the ability of a poor household exposed to hazards to resist, absorb, adapt to, and recover from the effects of hazards in a timely and efficient manner, without jeopardising their sustained socioeconomic development. Therefore, the more effectively that regular programmes are implemented, covering those who need support with an adequate level of high quality, timely assistance, the more they are promoting resilience to shocks. The Community-Based Health Insurance makes by far the greatest contribution to coverage of the population by social protection, reaching some 74% of households (NISR, 2018a); the VUP reaches about 4% of the population (NISR, 2018c).

VUP Direct Support

VUP is promoting household risk absorption through direct income support to smooth household consumption all year round. The regular, predictable and timely cash transfers under VUP contribute to strengthening the adaptive capacity of households to risks through increased household savings, productive asset ownership and livelihoods inputs. The coverage of the VUP Direct Support is planned to remain constant over the next five years, at around 100,000 households, while the Nutrition-Sensitive Direct Support has been introduced and may scale up (MINALOC, 2019). The ability of the Direct Support to reduce household vulnerability is strengthened by the fact that the transfer value is adjusted by household size. Being an instrument with predetermined values rather than a guaranteed minimum income, however, its value is not adjusted to the individual circumstances of every household.

VUP Expanded and Classic Public Works

The Expanded and Classic Public Works programmes play a less significant role in risk absorption for households than Direct Support, because the transfer value is mostly much lower (especially for Classic Public Works where the monthly rate is not fixed). Nonetheless, the recent introduction of the Expanded Public Works component is a positive step, opening up the opportunity of support to many households who were previously unable to access the 'classic' version owing to eligibility constraints.

For the Classic Public Works component, improving day-to-day implementation will greatly improve its ability to deliver on its 'welfare' function. Areas for potential improvement—including timeliness of payment, amount of time travelling to work sites and number of days of work available to each household—are widely documented (e.g. MINALOC, 2019). Streamlining the project administration, such as procedures for selecting and

approving projects, overseeing them and signing them off, may assist in this regard. Respondents recommend a focus on these improvements to Classic Public Works before proceeding to any further expansion of the programme.

VUP Livelihood Development component

Social protection can support people in changing or diversifying their livelihood activities. This is particularly important where climate variability is projected to destabilise the sustainability of natural resource dependent livelihoods (e.g. small-scale farmers in drought-prone areas of eastern Rwanda). This includes for example, by providing microcredit and skills support to promote off-farm rural enterprises. The VUP Livelihood Development component has been designed to offer these complementary services, to VUP beneficiaries and to others according to their Ubudehe category. The Financial Services element has long been integral to VUP, while the Asset Transfer and Skills Development elements are newer. These are welcome adjustments to VUP design. It is not yet clear how much these will support diversification of livelihoods to off-farm options. Links between VUP and the Rwanda Social Security Board, enabling informal sector workers to pay into formal social security mechanisms, are also welcome.

Girinka

The Girinka programme has similar objectives to the VUP Asset Transfer scheme, and has been running for over a decade. To date around 380,000 households have received a cow. Its intention is to improve household resilience in many ways at once: it provides milk for the household; surplus milk can be sold, increasing and diversifying household income; and manure can be used for fertiliser, improving crop productivity. On receiving a cow, households also get a year of livestock insurance and free vet services by the sector veterinary, with the expectation that income from the sale of milk can be spent on subsequent insurance premiums.

The extent to which all these resilience objectives are met is not clear. A recent assessment noted a considerable rise in milk production in the country consistent with the timing of the introduction of the programme, but did not quantify the impact of cow ownership on poverty reduction; it focused more on implementation issues including around governance and targeting (Rwanda Governance Board, 2018).

Adjustments have been made to increase the scheme's relevance for absorbing risk. For example, the original requirement for beneficiary households to own their own land has been removed, thus extending eligibility to poorer households. Other design adjustments being made should further increase its relevance for risk absorption. In particular, an expansion of the scheme to smaller livestock—goats, pigs, lambs—should reduce the cost of animal feed, reducing the financial burden on recipient households.

Input subsidies under the CIP

Providing subsidised agricultural inputs (e.g. seeds, small irrigation systems, fertilizer) to households according to their Ubudehe category has the potential to improve household incomes and puts them in a relatively fair position to absorb shocks. Other subsidies reported by respondents during fieldwork for this study included those for biogas construction (the district pays 70% and the individual pays 30%); and irrigation pumps, where individuals in Ubudehe categories 1 and 2 paid 25%, and those in higher categories paid 50%, while the local government meets the rest of the cost. This extra discount for lower Ubudehe categories may serve as a social protection measure, though it relies on their being able to afford the subsidised price. Respondents said that even with subsidies the pumps can be prohibitively expensive.

It should be noted that, for some households, the CIP may increase exposure to climate risks and reduce the ability to absorb shocks. While CIP aims to increase incomes for farmers through land consolidation and increasing access to high quality agricultural inputs, it can also lead to reduced diversity of cultivated crops and can aggravate existing land and resource access issues, resulting in food insecurity (Clay and King, 2018). As some smallholders do not benefit from the land use practices that are recommended through CIP, it may be important to consider how other climate-smart agricultural practices can be promoted, such as conservation agriculture or agroforestry. This can protect smallholders from being pushed into poverty or food insecurity from climate-shocks while promoting more sustainable agriculture practices.

6.2.2. Responding to disasters

We saw above (section 2.2.2) that, besides their general resilience-building role, social protection programmes may be able to contribute to risk absorption by providing assistance in the event of specific shocks. To what extent do the national social protection programmes offer this function of anticipatory action, emergency response and support for post-disaster recovery (and to what extent are these functions required)? We look in turn at the VUP, and at other programmes.

The VUP

The recognition in social protection policies, of the role of VUP in responding to shocks is nascent, and some policy inconsistencies exist e.g. on poverty targeting versus categorical targeting, and geographical versus country-wide scale up of Classic Public Works. These potentially have varying outcomes for shock-responsiveness—as explained in section 5.1. Attaining policy coherence is an important first step towards laying out an implementation framework for making the system shock-responsive.

The strongly decentralised management and delivery of VUP offers an opportunity for districts to make implementation tweaks to respond to location-specific shocks and vulnerabilities. While LODA focuses on design of implementation guidelines that respond to emerging challenges; coordination of planning and budgeting; capacity building of local governments; programme oversight and risk management, local governments have budget allocations, and the autonomy to plan for delivery—within existing guidelines. If functioning well, this decentralised approach might allow tailored decision-making on the nature of public works, beneficiaries, etc.

Features in the VUP's design and implementation determine its actual and potential contribution to shock-response (see also Box 4):

- *Coverage:* One of VUP's shortfalls is its limited coverage, at only 4% of the population. This means that even among the poorest households in Ubudehe category 1, and one out of every 50 households in Ubudehe category 2, were participating in the scheme as of 2016/17 (NISR, 2018c). We cannot assume that households affected by a shock are also likely to be VUP beneficiaries, nor that VUP status should determine eligibility for emergency relief. The overlap may be small. Decisions could be taken to expand the coverage (horizontal expansion), but, given the current speed of adjustment of the Ubudehe status (see section 5.4), this is more likely to be relevant to support households' post-disaster recovery than for immediate emergency response.

- *Transfer values:* For social protection to effectively protect people from the negative impacts of shocks, the size of the transfer and type of support has to be able to maintain the routine consumption needs of the beneficiaries, while at the same time supporting their recovery from a shock.

VUP transfer values do not change to respond to shocks, and, indeed, they may not need to, given the likely lack of correlation between a household's VUP status and the chance of it being affected by a shock. It would be more appropriate for shock-affected households to be identified and receive any cash or in-kind assistance *irrespective* of their VUP status, under a separate emergency response programme (see below); for VUP beneficiaries this would serve as a 'top-up', without the assistance having to be tied to the programme.

Transfer values for the VUP Classic Public Works vary according to the wage rates, cost of living and type of work in respective districts. This rate is set once per project, which has the advantage that the transfer value does not decline when the supply of labour and demand for extra work increases in times of crisis. The drawback is that it is not adjusted for price rises which frequently occur in situations of shock. Expanded Public Works beneficiaries are paid a fixed rate.

- *Duration and timing of assistance.* As noted elsewhere in this report, implementation challenges with the VUP include the timeliness of payments and, for Classic Public Works beneficiaries, the number and timing of paid days available. Until these are resolved, channelling emergency response through the VUP may not generate significant efficiencies. In particular, with planning for VUP Classic Public Works starting at the beginning of the financial year in July, and implementation starting only around December, for much of the year there is no opportunity to participate, including in the lean season around October–November when demand for work is highest. Shocks may well occur in periods when public works projects, and consequently transfers, are not available. Conversely, when projects are available, eligible households may be occupied on their own agricultural plots. This, plus the challenge that even the regular public works tend not to be able to create work for the number of days they intended, means that the prospect of being able to horizontally expand the Public Works scheme to absorb any extra demand for labour is somewhat limited. One option that might offer flexibility might be to offer temporary VUP Public Works projects to repair damage caused by, say, a flood or landslide.
- *Payment systems:* The SACCOs, through which VUP payments are made, are on average within an hour's walking distance of most beneficiaries' homes. While the system is effective, it can also potentially be affected by shocks—e.g. if parts of a sector are cut off due to a flood or landslide. LODA is considering diversifying payment options to include mobile banking and agent banking, which would cushion payments against disruptions, and diversify payment options for beneficiaries. To the extent possible, these financial services should be extended to the entire population—and not limited to VUP beneficiaries—to allow the same platforms to be used for cash transfers to non-VUP beneficiaries as part of emergency response.

Box 4. A note on the tendency to look to social assistance programmes as a vehicle for channelling emergency response

In other countries, and especially over the last few years since the shock-responsiveness of social protection systems has become a focus of increased international attention, there is a tendency to look for one 'flagship' social assistance programme that can become the frontline of emergency assistance, enrolling additional beneficiaries or lending its staff, payment methods, databases and beneficiary lists for use by emergency response actors. That model relies on an assumption that the flagship programme has its own infrastructure and resourcing that is superior to those available elsewhere, and that on balance this is likely to be more efficient than alternative methods of delivering emergency assistance. In some countries this may, indeed, hold true.

Rwanda is already beyond this stage, because the VUP does not so much have its own systems, but rather—and rightly so—it is integrated into systems that have been established for the social protection sector as a whole. The staff are social protection staff; the database for targeting is a social protection database (the *Ubudehe*); the payment method is through SACCOs which are not exclusive to the VUP and so on. Exploring whether social protection systems can be relevant for post-disaster response therefore does not require looking only at the VUP, because sector-wide systems are available. There also already exist other programmes under the social protection 'umbrella' that are responsible for emergency relief (see below).

The apparent limited relevance of the VUP for post-disaster response should not be viewed as a disappointment: in fact it is a sign of the healthy variety of instruments and support systems already available nationally. Moreover, this does not mean that the VUP should disregard the frequent and variable shocks that the country faces. All the adjustments to its own programming that will enhance its effectiveness and improve its flexibility year-round, as per the observations in this subsection, will be valuable in a shock context as well.

Among the portfolio of social protection interventions in the country there are already several that provide emergency response. We look at these next.

Short term emergency assistance

Rwanda has functional mechanisms for rapidly responding and supporting communities to cope with shocks; this is one of the four pillars of the country's social protection system. Shock-affected households can be identified explicitly without recourse to proxies such as beneficiaries of other programmes. For example, at the onset of a drought, cell leaders hold community meetings to identify the most affected households whose crops have failed and who lack effective coping mechanisms. These may or may not be VUP beneficiaries². Nor is the beneficiary list restricted to any *Ubudehe* category. It is usually the case however, that individuals in lower *Ubudehe* categories are more disproportionately affected by covariate shocks and are more likely to be included. The approach is effective because covariate shocks may indeed impact people in other *Ubudehe* categories and cause them to lapse into poverty. The existing community-based targeting system is cognisant of this risk, and through it, households in need of food assistance have received support.

In this way, the targeting approach promotes community participation in assessing need and maintains community cohesion and altruism. The list of households is sent to the sector, which aggregates data from all affected cells and submits to the district. The district verifies the existence of the drought and submits an aggregate list together with a request for support to MINAGRI. MINAGRI then draws from the national food buffer—the Strategic Grain Reserve—and works with the Ministry of Defence to coordinate a swift response. In Kayonza, for example, it was reported that the entire process from identification of the drought to response (distribution of maize grain and beans) took four weeks during the 2019 drought.

In that instance the system for drought response seems to have been both effective and timely. It could be useful to document it as part of standard procedures for implementation across the country. A more in-depth analysis might determine whether this system is the most efficient and sustainable option for responding to weather-related shocks.

According to our understanding, the process for responding to floods, landslides, windstorms and other rapid-onset events is similar to those for drought: the community identifies the most affected households, and in-kind support (often iron sheeting for roofs) is made available to those in need. Again, assistance is not restricted to those in a particular *Ubudehe* category, nor to VUP beneficiaries, since there may not be a correlation between those classifications and the likelihood of being affected. As a preparedness measure before an imminent hazard event, people in high-risk areas can be temporarily relocated: households in areas not at risk are requested to offer accommodation, or else the district may pay rent on behalf of affected households. This is a form of anticipatory action.

²The important thing is not that emergency assistance be given to a household purely because it is in the VUP, but rather that being in the VUP should not exclude them, i.e. it should not be counted as 'double-dipping'. The VUP is intended to ensure households have at least a minimum acceptable standard of living; the weather shock may increase the level of needs, in the same way that it might for non-VUP households.

In our research we did not hear that cash was much used as a modality of emergency response and its appropriateness will depend on context. In one community, respondents expressed a preference for receiving food during droughts, because they noted that the food supply declined, and that receiving in-kind transfers insured them against the risk of price rises. In another, respondents expressed an interest in the possibility of being able to deliver other material support besides iron sheeting. Notwithstanding the potential benefits of cash transfers in boosting the local economy, by raising this point, we do not imply that cash transfers to households *should* be provided as an alternative to current practices, especially if the supplies that households seek are unavailable on the market. Keeping funds at district level for use for paying rent on behalf of relocated families may also remain relevant.

Two gaps were highlighted by our respondents:

- 1. Post-disaster recovery.** Assistance is more readily accessed for immediate response, but less so for post-disaster recovery to help households restore assets and livelihoods. There may be a gap between the support offered in the first weeks after a shock, and the assistance available perhaps a year later when the household may become eligible to be reclassified under Ubudehe and enter the VUP. As mentioned, it would be useful to consider how to plug this gap, i.e. whether it is possible to speed up the reclassification under Ubudehe, or waive the Ubudehe requirement for eligibility for participation in VUP Public Works or Direct Support.
- 2. Psychosocial support.** Several respondents from district to village level emphasised that climate shocks not only cause physical hardship but also psychological distress. When a household loses not only their home, land, livestock and/or other assets, but perhaps also family members, they may not be in a position to take advantage of the welcome material support. A cadre of social workers trained in psychosocial support might be a valuable addition to the social protection staff.

Questions that therefore merit further exploration, and that we were unable to ascertain within the timeframe for the present study, include:

- The extent to which procedures for short-term emergency assistance are already standardised nationwide. Do guidelines exist, and are they implemented?
- Opportunities for closer links between the short-term emergency response and early warning systems, to sensitise communities to imminent shocks or to enable districts and sectors to trigger preparedness activities, including anticipatory action;
- Whether there is scope and/or appetite to deliver other types of in-kind support beyond food, iron sheeting and other materials currently provided, during slow- and rapid-onset shocks;
- Whether or not there is any added value in considering cash transfers as an additional or alternative response mechanism, including for post-disaster recovery;
- Challenges and/or opportunities for improvements in efficiency or cost in current delivery, e.g. for procuring or transporting food for the Strategic Grain Reserve;
- Whether districts that occasionally experience drought but are less prone to it (such as those in the west) are as ready as those in the east to address them;

- Options for increasing access to psychosocial support.

6.3. Transferring risk: Insurance schemes for low frequency, higher impact shocks

Transferring some of the risks faced by communities to financial institutions through insurance mechanisms can provide timely assistance to households that serves as a form of shock-responsive social protection. Creating the enabling environment for an inclusive insurance market can support households in managing the risk that low frequency, high-impact climate shocks have on livelihoods and prevent people from being driven further into poverty or losing productive assets.

National Agriculture Insurance Scheme

MINAGRI launched its livestock and crop insurance scheme, the NAIS, in April 2019 to increase farmers' access to financial services and credit and protect their investments in agricultural productivity from weather and pest related risks. The government subsidises up to 40% of the cost of the premiums. The livestock insurance mainly covers dairy cows, as well as cows that were transferred to households through the Girinka programme. To date, 4,500 cows have been insured (excluding Girinka). The target is to insure 21,400 cows by June 2020. Crop insurance covers land under rice and maize cultivation, with 2,500 hectares insured for 2019–20 season A. It is offered to farmers' cooperatives. The sum insured is equal to the cost of production—including seeds, fertilizers, pesticides, energy and labour—and not the potential yield, in order to lower the cost of the premium. It will pay out when average yields in a geographic area fall below 85% of the five-year yield average, which is referred to as 'area yield index insurance'. Three insurance companies are involved in the NAIS pilot, Prime, Radiant and Sonarwa. The sum insured per hectare of maize is approximately RWF 362,000, with an 8.25% premium costing RWF 29,865. For a hectare of rice, the sum insured is RWF 415,000 and the premium costs 7.08%, or RWF 29,380. This means that, even after the 40% subsidy is applied, farmers would have to pay nearly RWF 18,000 per hectare for the insurance. This may prevent lower-income households from being able to protect their farm investments through this scheme.

The programme is also developing a hybrid index insurance product. It will provide payouts if there is a rainfall deficit in the early period of the season, and continue using an area yield index for the late window. However, as mentioned, weather events in Rwanda can be highly localized, which can result in weather-based or area yield indices not accurately estimating actual on-farm losses. As the NAIS is scaled up, MINAGRI will have to conduct careful monitoring to ensure that the indices are calibrated correctly.

The NAIS is an example of a climate risk finance mechanism that provides predictable funding and support to households impacted by climate shocks. Providing agricultural households with financial assistance immediately after a reduced or failed harvest, in the form of an insurance payout, prevents food security from deteriorating into a food crisis and can encourage farmers to invest more in agricultural production. The main challenge is to ensure that payouts are distributed in a timely manner. There is potential for the NAIS to be linked to VUP's administrative systems and risk reduction activities through its public works, expanding access to insurance and financial services to lower-income households (see below).

Eligibility for the NAIS requires policy holders to be using improved seeds and fertilizers, and is unrelated to VUP status. Insurance will primarily be available to CIP participants receiving the input subsidy, which, as noted above, can have an uneven impact on smallholders' risk absorption and food

security. As the scheme is scaled up, an option may be to include other eligibility criteria that encourages insured parties to take risk reduction measures in their cultivation practices, in addition to expansion of the subsidies for low-income households that may not be able to afford the 60% premium but would benefit from the financial protection and services.

Increasing access to insurance for lower-income households can promote investment in agricultural productivity, but whether it is a more efficient shock-response than the sector-level early response is unclear. Depending on the efficiency of the sector-level disaster response, there may not be a need of expanding insurance coverage to households in Ubudehe category 1 or 2. However, if there is a need to promote increased investment in productive livelihoods and incentivize risk reduction, there is potential for expanding NAIS premium subsidies. This additional subsidy could be obtained by Expanded Public Works or Classic Public Works households engaging in additional workdays to pay for the 60% share of the premium. Such a scheme would be dependent on sufficient workdays being on offer, which would require addressing the current challenges in generating enough workdays to accommodate demand.

Community-Based Health Insurance

About three-quarters of the population choose to hold Community-Based Health Insurance and this makes an important contribution to households' ability to cope with shocks. This highly subsidised programme, whose benefit packages include preventive and curative services and essential drugs at health centres and some referral services and minor surgeries at hospitals, by definition covers individual health shocks rather than climate

shocks. Nonetheless, climate shocks such as floods and landslides can be accompanied by diseases and injuries. The scheme is therefore poised to enable affected people to receive timely health care, transferring some of the financial risk of the shock.

6.4. A note on avoiding risk

A key part of Rwanda's approach to DRM is to promote risk avoidance, in particular by relocating households from zones classified as high-risk. A recent planning document, the 'Multisectoral Joint Action Plan to Eradicate Extreme Poverty and Accelerate Graduation in 17 Districts', notes that some 40% of the population lives in either damaged housing or in areas that it considers high-risk (MINALOC, 2018). The plan proposes relocating nearly 12,000 households who are in Ubudehe category 1 from high-risk zones. This process is being undertaken on a small scale by districts and sectors, with individual or small groups of households being moved to settlements where services are concentrated (imidugudu), in areas considered to be lower risk. The process itself, while reducing disaster risk, also results in many changes to households' living conditions—including in terms of e.g. their assets, sources of income and social networks—which may be either positive or negative. They may also incur costs for constructing their new home. Depending on the type of relocation scheme, some of these costs are covered (for example, MINEMA offers iron sheeting for roofing, and sometimes other materials). It could be useful to review the current package of assistance to ensure that poorer households are able to make the necessary short-term investments in relocating, in order to reduce their longer-term exposure to risk.

Table 4. Actual and potential contribution of social protection instruments to DRM

Instrument	Actual contribution	Options to consider
Risk reduction		
VUP Classic Public Works	<ul style="list-style-type: none"> Construction of community infrastructure promotes soil and water conservation (e.g. terracing, drainage ditches, rainwater harvesting) Tree planting reduces erosion and prevents environmental degradation 	<ul style="list-style-type: none"> Implement commitment to refocus programme on areas at risk of climate-related shocks; or alternatively, implement commitment to expand overall coverage Review share of climate-related projects in national portfolio, identify constraints, develop information and material support for communities Ensure that technical standards are defined for each type of infrastructure to maximise their climate-sensitivity, and that maintenance plans for assets are in place
VUP Direct Support	<ul style="list-style-type: none"> Maintaining household consumption for beneficiaries, which may allow people to engage in their own risk reduction activities 	<ul style="list-style-type: none"> Messaging to beneficiaries to promote expenditure on climate-smart actions and livelihood options
VUP Sensitisation and Public Communication	<ul style="list-style-type: none"> No evidence of climate-related messaging at the moment 	<ul style="list-style-type: none"> Messaging to beneficiaries on climate-smart actions and livelihood options (choice of crops, conservation agriculture etc.) Weather forecasts to programme beneficiaries to inform farmers about the best planting time

Instrument	Actual contribution	Options to consider
Risk absorption		
VUP Direct Support	<ul style="list-style-type: none"> Transfer of resources increases income/consumption 	<ul style="list-style-type: none"> Explore the feasibility of adjusting transfer value to absorb shocks (e.g. to compensate for price rises)
VUP Classic Public Works	<ul style="list-style-type: none"> Increase in household assets Promoting savings Minimisation of negative coping strategies Diversification of livelihoods 	<ul style="list-style-type: none"> Extend duration of work-days available Improve alignment of projects with agricultural cycle, so work is available at periods of the year when most needed Improve timeliness of payments
VUP Livelihood Development	<ul style="list-style-type: none"> Use of SACCOs increases recipients' creditworthiness 	<ul style="list-style-type: none"> Link informal sector workers to formal social security mechanisms
Girinka	<ul style="list-style-type: none"> Increases household income and improves nutrition through provision of lactating cows 	<ul style="list-style-type: none"> More widespread distribution of smaller livestock may reduce the financial burden on the household of feeding the animal
Savings and Credit Cooperative Organisations (SACCOs)	<ul style="list-style-type: none"> Promoting savings for hard times Improving households' creditworthiness Providing a payment system for cash transfers to VUP beneficiaries 	<ul style="list-style-type: none"> Further digitisation of payment system may improve timeliness of payments to boost risk absorption capacity
CIP agricultural inputs subsidy	<ul style="list-style-type: none"> Providing subsidised agricultural inputs (e.g. seeds, small irrigation systems, fertilizer, etc.) 	<ul style="list-style-type: none"> Crop intensification can increase the risk exposure for farmers by limiting the choice and variety of crops, limiting their ability to absorb shocks; climate-smart agriculture techniques could be promoted through an alternative to CIP
Short term emergency assistance	<ul style="list-style-type: none"> Food provided to households affected by drought (e.g. by MINAGRI through the Strategic Reserve of Grains) Non-food items, including roofing materials, provided to households affected by weather shocks (MINEMA) 	<ul style="list-style-type: none"> Strengthen the Disaster Response Fund to enable timely and well-resourced emergency response Update district preparedness plans to enable coordination between sectors and actors to enable holistic response to community needs Include psychosocial interventions where necessary
Risk transfer		
NAIS (Crop & Livestock insurance)	<ul style="list-style-type: none"> Protecting households against financial consequences of extreme weather events Enabling households to become less risk-averse 	<ul style="list-style-type: none"> Expand access to insurance through links with VUP Classic Public Works or household asset creation that reduce risks to climate shocks for livestock and crops, enabling lower income households to pay insurance through labour participation Expanded insurance subsidies can also be conditioned on farmers adopting more sustainable agriculture practices or switching cultivation to more drought tolerant crops to combine risk reduction and risk transfer objectives
Community-Based Health Insurance	<ul style="list-style-type: none"> Protects households against financial consequences of serious illness / injuries arising from extreme weather events 	<ul style="list-style-type: none"> Ensure quick provision of health services in the immediate aftermath of a hazard (e.g. flood or landslide)

Source: Authors.

7. Final remarks

We have seen that climate shocks can be detrimental to household well-being, reversing development gains and impeding a reduction in extreme poverty. Climate hazards in Rwanda are well understood, the government and its partners are taking steps to mitigate or respond to the risks. We conclude with 10 observations on efforts to improve the climate-sensitivity and shock-responsiveness of social protection, and options for further exploration. We also indicate a few possible areas that may merit deeper investigation through subsequent analytical studies.

1. Weather shocks in Rwanda are typically very localised, be they floods and landslides (more common in the west) or dry spells (more common in the east). Inter-annual variability of rainfall is high: people 'expect the unexpected'. Shocks may affect a few households, or a few villages, at a time. But with several hundred such high-frequency, low-impact events each year, the cumulative effect is considerable.
2. Social protection already goes a long way in addressing weather-related shocks by virtue of efforts to 'do good social protection' and strengthen core systems and programmes. It contributes to DRM objectives—risk reduction, risk absorption (through both resilience-building and disaster response) and risk transfer—because its function is to reduce vulnerability. Social protection strategies and guidelines are relatively clear and consistent on this point. DRM strategies are less explicit about the contribution of social protection, but their objectives are not inconsistent. Social protection integration into DRM policies and plans can be further explored.
3. The social protection 'policy problem' posed by weather shocks in Rwanda is mainly about minimising fluctuations in poverty—households being pushed (or pushed deeper) into poverty, or better off households losing assets—not about covariate shocks where thousands of people are affected by one event (like an earthquake or major drought). This differs from 'shock-responsive social protection' elsewhere, which is often about handling these large caseloads. The shock-responsive social protection challenge in Rwanda is also distinctive in that the priority is to enhance collaboration between government entities responsible for DRM and social protection, rather than to find a way to take over caseloads from international agencies or streamline large donor-funded emergency responses with government social protection systems.
4. In the last three years or so, the government has introduced or altered many social protection schemes that respond to these needs. The VUP Safety Net component, Girinka and the CIP's input subsidies all aim to strengthen resilience; the VUP Livelihood Development component adds to the initiatives with this goal. MINALOC's short-term emergency assistance absorbs risk through disaster response. VUP Classic Public Works aid risk reduction, while the new NAIS

is a risk transfer mechanism for weather shocks. Low coverage is a limitation (4% of the population gets VUP support), though an expansion is planned. 'Design tweaks' may enhance the effectiveness of these schemes, many of which already have a shock focus.

5. For **risk reduction**, if the VUP Classic Public Works is to improve its contribution it will be useful to resolve, first, whether it will be expanded, shrunk or refocused to crisis-prone areas; and second, how to increase the number of days' work for participants and their timing. An analysis of trends in the portfolio of projects may help identify the feasibility of increasing the number and quality of projects with a direct objective of reducing climate risk.
6. For **risk absorption via reduced household vulnerability**, expanding social protection programme coverage goes a long way. The adequacy of the transfer also matters; this is an issue mainly for VUP Classic Public Works, owing to the number of days offered. The proposal for Girinka to offer smaller livestock may help reduce the financial burden on recipients. Being in receipt of social assistance is itself a way to reduce vulnerability; one should be cautious about graduating or removing households prematurely from social protection if this risks returning them to poverty when a shock occurs.
7. For **risk absorption via disaster response**, a pillar of the strategic plan and a programme are already in place (the short-term emergency assistance). Our brief discussions indicated that it can deliver fairly fast, relevant in-kind assistance. It is worth considering if improvements can be made. If the VUP is to be used for disaster response, one route would be to speed up requests by households for a review of their Ubudehe status, which might automatically make them eligible for the VUP. This would be part of a 'design tweak' to the regular VUP: we do not foresee a need to create a mechanism of 'horizontal or vertical expansion' that applies exclusively to weather or other covariate shocks, since the same rapid response is relevant for any household that experiences a shock, including, for example, an accident that prevents a household member from working. Even if the Ubudehe system is replaced, the need for rapid reassessments of household status will remain. While Direct Support and Expanded Public Works may be able to handle natural fluctuations in beneficiary numbers, it is not apparent that the Classic Public Works would be able to offer this function given the difficulty of finding enough work for people at the right time of year. Meanwhile, there remains a gap in the provision of psychosocial support for disaster-affected people.
8. For **risk transfer**, the introduction of the NAIS should be a help. As most households have health insurance, the concept of insurance is familiar. An option tested elsewhere is to enable people to pay premiums by working additional days on the Public Works scheme; again, this requires enough extra days to be available.

9. At system level, increasing the timeliness of responses relies on the availability and rapid release of funds. The creation of the Disaster Response Fund demonstrates that this is recognised; the difficulty in funding it suggests the need for further support to operationalise it. The social protection system will benefit from enhancements to local capacity, including addressing unfilled posts. Further dialogue across DRM and social protection at decentralised level can be pursued. Adjustments to M&E may capture progress in some aspects beyond the extreme poverty headcount.
10. Further actions in 2020, including a High-Level Workshop and activities at the local level, will help promote a coordinated approach to improving the climate-sensitivity and shock-responsiveness of social protection, learning from best practices and in keeping with the agreed direction of development of the social protection sector.

Box 5. Suggested further analytical studies

As per the observations throughout this report and comments received from peer reviewers, in subsequent stages of policy development on the climate-sensitivity and shock-responsiveness of social protection it may be useful to conduct further analysis on a number of relevant topics:

- Long-term climate projections (e.g. over a 30-year time horizon), and their implications for poverty and vulnerability
- An organisational assessment of social protection and disaster response capacity at district level, highlighting human, financial and material resource capacities and shortages, good practices, usability of the district disaster management plans etc. This could then be compared against the vulnerability levels of the districts.
- In-depth review of current emergency response mechanisms—especially in-kind food and non-food distribution—and the accompanying plans, procedures and their implementation, to understand what works, challenges and further opportunities for enhancement.

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