

RATIONALE FOR THE FIVE PRIORITY AREAS IDENTIFIED AT THE PROVINCIAL DROUGHT DIALOGUE

With alignment to the SmartAgri Plan

30 September 2016

Background

The Western Cape Province is historically prone to rainfall variability, unseasonal dry spells, and droughts. Severe droughts reduce production, employment and social welfare, with impacts on household food security. In addition, climate change projections indicate significant warming and drying (particularly in the western parts) with a heightened risk of droughts. The 2015/2016 drought and heat wave led to losses of 200 000 tonnes of wheat (50-100% per farm), 230 ha of potatoes, and 15% of fruit, with \pm ca. 17 000 cattle requiring fodder assistance.

The Western Cape Department of Agriculture (DOA), in conjunction with the Department of Environmental Affairs and Developmental Planning (DEA&DP), hosted a provincial multi-stakeholder Drought Dialogue in June 2016 to discuss the current drought, lessons learnt and ways to mitigate drought conditions in the future. Agreement was reached on a set of 32 high priority, actionable interventions for the provincial government to strengthen the response to the current and future droughts. These were further refined to five areas for immediate attention:

No	Priority
1	Bridging finance to keep farmers on farms
2	Optimise water usage (surface and ground water)
3	More accurate predictions of droughts and disasters
4	Develop a social security net to support mostly rural communities and agri-workers adversely affected by drought
5	Revisit water management and policies currently hampering new infrastructure

An action plan for the five priorities will be developed under the guidance of the Drought Task Team of the DOA, in partnership with Agri Western Cape and AFASA.

The provincial government also launched the Western Cape Climate Change Response Framework and Implementation Plan for the Agricultural Sector (the "SmartAgri Plan") in May 2016. This is a similarly collaborative project between the DOA and DEA&DP. The Plan was strongly informed by stakeholder participation over the course of more than a year. It covers a continuum of time scales, from immediate responses to severe weather events such as drought, to long-term transformations within the agricultural sector aimed at achieving greater

resilience. The SmartAgri Plan proposes the following four Strategic Focus Areas (SFA):

SFA	Description
1	Promote a climate-resilient low carbon production system that is productive, competitive, equitable and ecologically sustainable across the value chain
2	Strengthen effective climate disaster risk reduction and management for agriculture
3	Strengthen monitoring, data and knowledge management and sharing, and lead strategic research for climate change and agriculture
4	Ensure good co-operative governance and institutional planning for effective climate change response implementation for agriculture

The drought dialogue priorities correspond closely with areas of the SmartAgri Plan – this was already identified during the dialogue. Clearly, these synergies should be further explored in order to optimise planning and resourcing for implementation.

This draft document provides a brief rationale for each of the five drought dialogue priorities, with alignment to the SmartAgri Plan.

1. Bridging finance to keep farmers on farms

The drought has placed some commercial and smallholder farmers in a serious financial predicament. In many instances debt incurred for planting and management inputs cannot be serviced owing to the high levels of crop failure. Escalation of carry-over debt also means that such farmers are unable to access affordable production credit for the next season. Farmers who cannot fall back on savings, investments or other assets to tide them over the drought period and its aftermath could be forced off their farms. The worst instances of such vulnerability are found amongst resource-poor smallholder farmers and new commercial farmers with no financial buffers. Such an outcome can have dire consequences for the farmers and their families, as well as their workers, communities and local agricultural service providers. Alternative livelihood opportunities are scarce and forced urbanisation can increase household food insecurity.

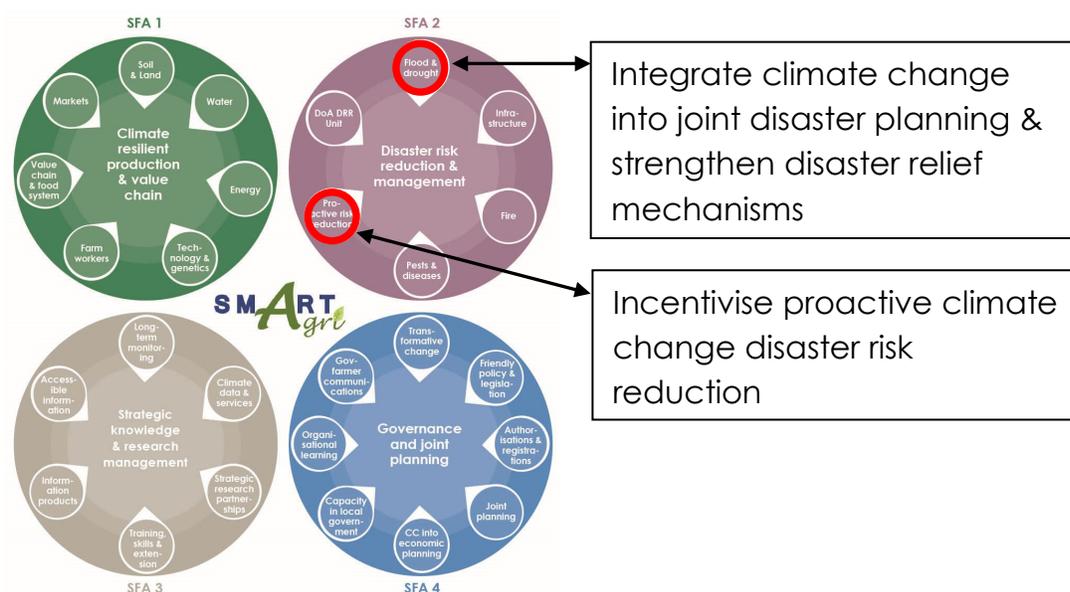
This priority calls for discussions between the agricultural sector, the financial/insurance sector and government, in order to identify sustainable, affordable and accessible financial/insurance models to help farmers stay on their land. This should draw on South African contexts but also global best practice for drought support. Possible approaches could include interest rate subsidies for outstanding debt, other forms of debt restructuring, and provision of affordable production credit for the new season. State guarantees could be provided for a portion of the carry-over debt of distressed farmers for a period of time. For farmers with a small turnover a cash grant could support the next season's inputs and operating expenses.

Farmers across the spectrum are increasingly unable to afford crop insurance, and for some commodities in some areas insurance has become unavailable due to high risks. Innovative insurance products are needed for the future. These could include micro-insurance or weather index insurance models and solutions for joint risk management e.g. between government, insurance companies and farmers.

While it is widely acknowledged that government subsidies and 'bail-outs' during droughts, although common in the past, may not be sustainable going forward (with expectations of increasingly frequent climate-related disasters), these should still form part of an overall response strategy especially for the most vulnerable farmers during severe disasters.

Role players: DOA, Land Bank, insurance companies and micro-insurers

Alignment with the SmartAgri Plan:



2.1.3 Streamline and speed up rapid response (including fast-release of financial mechanisms) to address climate-related disasters

Key enablers: Motivated Provincial and National Departments

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Establish a provincial (WCG:Agriculture) annual contingency disaster fund for disaster relief and disaster risk reduction through implementation of the 1.2% sub-Departmental levy as per NDMF	S-M	Lead: WCG:Agriculture Support: WCG:DMC, DAFF, WCG:Treasury	2.4.1
Assess previous climate-related disasters to identify historical damages and costs, and avoided costs due to risk reduction, for the purposes of future budget allocation, with incorporation of climate change trends	S	Lead: WCG:Agriculture Support: WCG:DMC, DAFF, DWS	
Promote the establishment of an improved national drought and disaster contingency fund comprised of separately-managed early response (for slow-onset disasters) and rapid response (for rapid-onset disasters) functions, and funding of risk reduction efforts in order to strengthen the resilience of high-risk communities	S-M	Lead: WCG:Agriculture Support: DAFF, insurance companies	2.4.1

2.5.1 Incentivise / reward proactive on-farm climate disaster risk reduction based on best practice environmental, conservation and land management

Key enablers: Buy-in by government and insurance companies

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Expand the criteria for on-farm disaster assessments to include sustainable and climate smart agricultural practices in order to encourage proactive disaster risk reduction within a viable business model	S	Lead: WCG:Agriculture Support: WCG:DMC, organised agriculture, industry best practice initiatives, WWF-SA Sustainable Agriculture, insurance companies	1.1 1.2 2.2
Assess the viability of establishing appropriate micro-insurance and/or index insurance schemes for smallholder farmers	S	Lead: micro-insurance and insurance companies Support: WCG:Agriculture	

See also Box 2: The role of the finance sector (P.30) in the SmartAgri Plan.

2. Optimise water usage

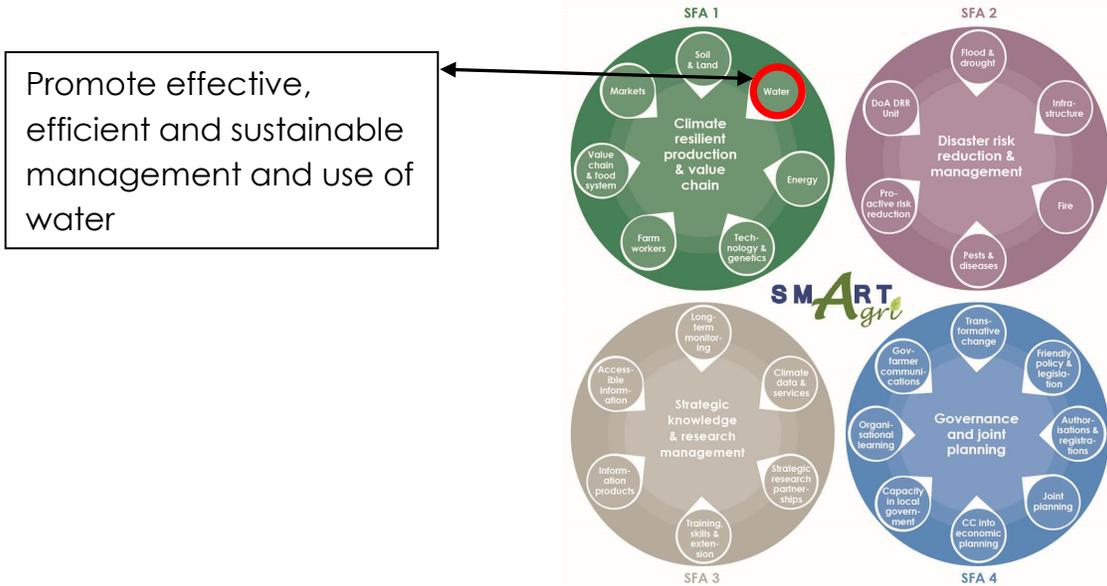
During severe droughts both surface and ground water resources decline significantly. In 2016 dam levels in the Western Cape were at levels which necessitated the implementation of water restrictions for various users including irrigation agriculture in some areas. Agriculture in the province is highly dependent on irrigation using water from public and private dams, river systems and aquifers.

In times of water scarcity it is essential to use water carefully and strategically. Such decisions are made at farm level, by municipalities and by the Department of Water and Sanitation (DWS) through the Catchment Management Agencies (CMAs). Decisions around water use are complex, requiring trade-offs and should result in greater efficiencies and optimisation of overall benefits. With dam levels plummeting, many fruit and wine farmers in 2016 continued to irrigate until harvest, in order to reduce short-term impacts on yield and crop quality. This meant that water was not available for post-harvest irrigation, with longer-term negative consequences for the trees/vines. Another example is that water could have been strategically re-allocated to fodder production in order to minimise livestock losses - herd rebuilding can take many years at great cost. Both government and farmers sunk new boreholes to access groundwater, but this resource can be over-extracted by one user to the detriment of other vulnerable users of the same aquifer without proper planning.

This priority action revolves around the need to manage water use more optimally during times of drought. It requires various approaches which could include focused research and modelling studies, the development of 'smart' water decision-making and management systems, assessment of possible water rights re-allocation during droughts, greater uptake of water saving irrigation systems and precision irrigation together with good soil moisture management (e.g. mulching), prioritised infrastructure maintenance to reduce water losses, and a better understanding of and strategic use of ground water. It is also important to ensure that smallholder farmers and new commercial farmers have sufficient access to water in order to protect livelihoods. Finally, water-related decision tools must factor in the critical importance of not escalating household food insecurity through lack of irrigated food production.

Role players: DOA, Water Research Commission (WRC), CMAs

Alignment with the SmartAgri Plan:



1.2.3 Increase effectiveness and efficiency of agricultural water use by promoting water-saving irrigation systems and scheduling and increased use of FruitLook

Key enablers: Continued and expanded funding for development of commercially viable service, Extended coverage

Proposed Activities	Time-frame*	Lead & support Institution	Link-ages
Extend the spatial reach, temporal coverage (months of the year) and user base of the FruitLook programme to make it commercially viable, and provide interpretative tools for users	S	Lead: WCG:Agriculture Support: eLEAF, commodity organisations, other role players	
Promote water-saving irrigation systems and precision irrigation technologies	S-L	Lead: Input suppliers, commodity organisations Support: farmer organisations	

1.2.4 Promote sustainable and compliant groundwater use and management for agriculture through a better understanding of the groundwater system and safe abstraction rates, monitoring, and land management to increase infiltration

Key enablers: Awareness of groundwater vulnerability and opportunity

Proposed Activities	Time-frame*	Lead & support Institution	Link-ages
Assess the feasibility of increased utilisation of groundwater of suitable quality in areas of greatest need of additional water sources (per agro-climatic zone), in conjunction with available surface water sources, as a climate change adaptation strategy	S	Lead: WRC, WCG:Agriculture Support: DWS, CMAs, GEOSS	1.2.1
Develop a model of groundwater availability and extraction which contributes to more resilient agriculture, starting with a pilot study in the Stanford-Gansbaai area	S-M	Lead: BGCMA Support: DWS, WCG:Agriculture, WRC	
As part of the promotion of best practice land management, encourage the protection / rehabilitation of recharge zones to facilitate greater infiltration and reduced surface water runoff during winter 	S-L	Lead: WCG:Agriculture Support: WWF-SA, DEA EPWP, commodity organisations, farmer organisations	1.1.1 1.1.2 1.1.3

3. More accurate predictions of droughts

Drought is a slow-onset disaster, which means that, with attention to monitoring (observation) and analysis over time, the development of the drought can be followed and farmers informed of the situation as it develops. An early warning system (EWS) is designed to allow farmers to make timeous risk management decisions which will increase their resilience to the expected impacts. It comprises four inter-related elements: risk knowledge (understanding the hazard and vulnerability), a monitoring and warning service, dissemination and communication, and response capability.

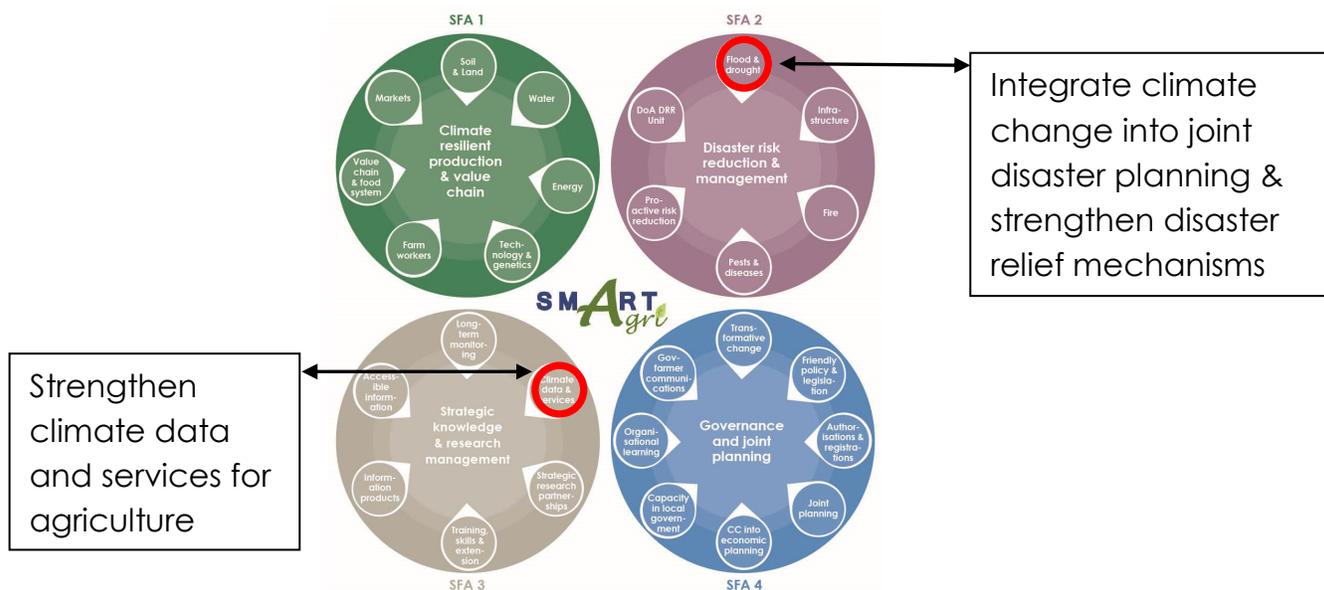
Farmers in the Western Cape do have access to early warning advisories which are channeled from the South African Weather Services (SAWS), the Department of Agriculture, Forestry and Fisheries (DAFF) and the Agricultural Research Council (ARC) through the DOA. The DOA's Agri-Outlook is an online tool that provides monthly reports about climate and weather conditions in the province, and also provides future monthly weather predictions from the national institutions. Nevertheless, the seriousness of the 2015-2016 drought was perhaps not as widely recognised and acted upon as it should have been, apparently taking some parts of the sector by surprise.

The possible weaknesses in the system need to be carefully analysed and recommendations for improvement implemented. If the knowledge base was inadequate, more attention should be given to achieving greater spatial resolution and accuracy of drought predictions and advisories. This would require more investment in research, observation networks and technology development. Improved forecasting models could include better quantification of uncertainties and short- and medium-term outlooks for farming conditions. An emerging need is for farmers to be given more information on how climate variability is changing and is projected to continue to change within the bigger long-term issue of climate change.

The other area which showed weakness was that of dissemination and communication. The responsibilities lie with both the provider and the end-user of knowledge who decides how to respond. A critical element is the translation of risk knowledge into up-to-date information and recommendations on how to manage specific crops and livestock and to reduce on-farm disaster risk. Finally, communication channels for the dissemination of climate-related early warning advisories must be accessible to a wide range of farmers using various media.

Role players: DAFF (Directorate: Climate Change and Disaster Management), DOA, SAWS

Alignment with the SmartAgri Plan:



2.1.2 Improve early warning systems (EWS) in co-operation with farmers and role players

Key enablers: Innovative approaches to communication

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Assess suitable, effective and low-cost communication channels for the dissemination of climate-related early warning advisories, including evaluation of successes and identification of gaps	S	Lead: WCG:Agriculture Support: SAWS, DAFF, organised agriculture, farmer organisations	3.6
Assess the current spatial resolution and accuracy of climate-related early warning advisories, with recommendations for improvement	S	Lead: WCG:Agriculture Support: SAWS, DAFF, organised agriculture, ARC	
Investigate the potential for using existing crime prevention farming community networks, WUA networks, and FPA networks to disseminate climate-related early warning advisories	S	Lead: WCG:Agriculture Support: WCG:Community Safety, SAPS, SAWS, DAFF, organised agriculture, farmer organisations	4.4.3

3.2.1 Strengthen existing weather forecasting services and assess the feasibility of new forecasting services to deal with climate variability under climate change more effectively

Key enablers: Accessible forecast data and information

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Support and refine Agri-Outlook services to provide more timely and directed livestock- and crop-specific information and interpretation of climate data for planning and disaster risk management purposes	S	Lead: WCG:Agriculture Support: commodity organisations	
Assess the feasibility of providing 10-to-15-day forecasts that quantify level of uncertainty, seasonal outlooks, and medium-term (2-10-year) climate outlooks for farming applications necessary for responding to changing climate variability, and identify capacity amongst partners to provide these services	S	Lead: SAWS, DAFF Support: CSAG, CSIR	

4. Social security net

The agricultural sector plays a very important role in the provincial economy and for food security. The sector is the most important provider of employment in the rural areas, has considerable further potential to drive economic growth, job creation and social development, both on farms and in rural towns. Severe droughts have historically always taken a disproportionately heavy toll on the most vulnerable part of the sector: the agri-workers and their communities. If the sector is to fulfil its envisaged role in the future it is imperative to focus on social protection mechanisms during the drought and the recovery period. This is relevant for both the permanent and seasonal agri-workers. The most effective intervention is likely to be the protection of jobs on farms and in related businesses, through targeted grants.

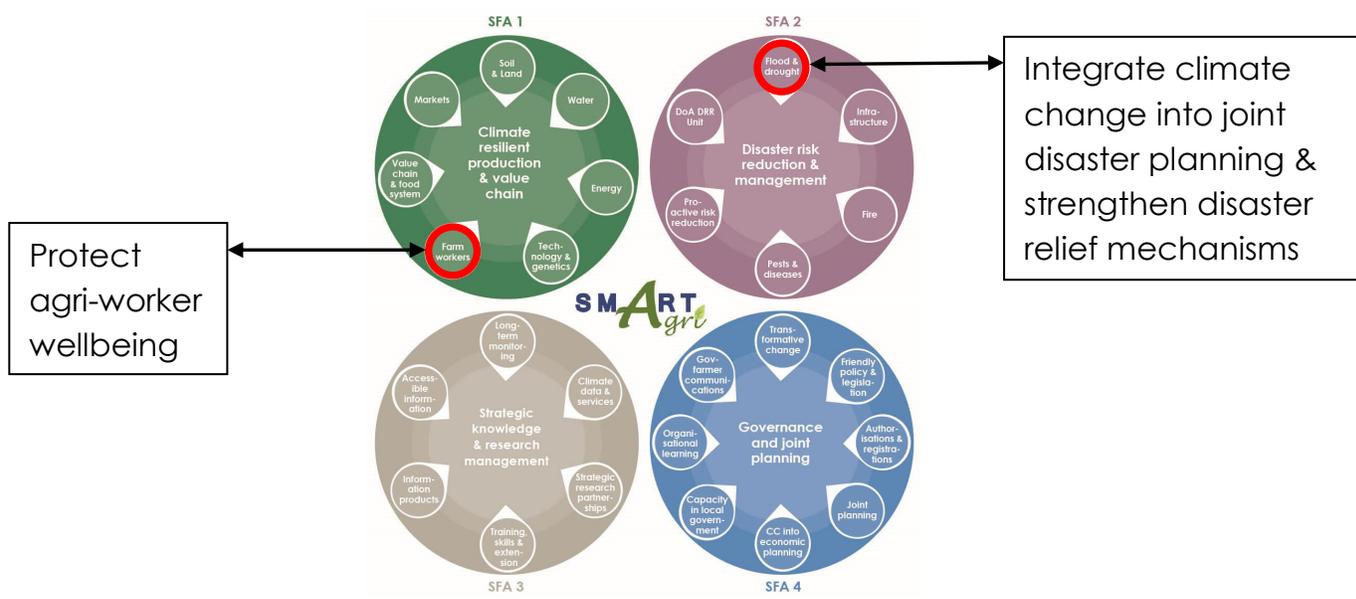
In the rural areas there are high levels of pre-existing vulnerable social conditions including unemployment, substance abuse, crime and violence, and underlying human health issues. Disasters such as droughts interact with, and compound these existing challenges. Humanitarian relief efforts become vital to supporting the impacted communities and upholding morale. Job losses or reduced wages lead to ripple effects throughout the social system and beyond the agricultural sector, with children, the elderly and the sick being particularly affected. Immediate emergency responses are needed to satisfy critical human needs of the most vulnerable households. It is important to identify these households correctly.

The 2015-2016 drought resulted in food inflation levels (for a low income household food basket) of 9.8% nationally. The average low-income household paid R82 per month more in June 2016 compared to June 2015. Possible interventions include the introduction of food stamps or the distribution of food parcels.

SASSA (the South African Social Security Agency) has already made provision at national level for some social relief for distressed households, in the form of emergency grants. Drought-affected communities in the Western Cape should be assisted in accessing these grants, through the Department of Social Development and the assistance of the DOA.

Role players: DOA, Department of Social Development, SASSA

Alignment with the SmartAgri Plan:



2.1.3 Streamline and speed up rapid response (including fast-release of financial mechanisms) to address climate-related disasters

Key enablers: Motivated Provincial and National Departments

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Establish a provincial (WCG:Agriculture) annual contingency disaster fund for disaster relief and disaster risk reduction through implementation of the 1.2% sub-Departmental levy as per NDMF	S-M	Lead: WCG:Agriculture Support: WCG:DMC, DAFF, WCG:Treasury	2.4.1
Assess previous climate-related disasters to identify historical damages and costs, and avoided costs due to risk reduction, for the purposes of future budget allocation, with incorporation of climate change trends	S	Lead: WCG:Agriculture Support: WCG:DMC, DAFF, DWS	
Promote the establishment of an improved national drought and disaster contingency fund comprised of separately-managed early response (for slow-onset disasters) and rapid response (for rapid-onset disasters) functions, and funding of risk reduction efforts in order to strengthen the resilience of high-risk communities	S-M	Lead: WCG:Agriculture Support: DAFF, insurance companies	2.4.1

1.5.3 Conduct an in-depth inter-disciplinary assessment of climate change impacts on agri-workers

Key enablers: Co-operative research environment

Proposed Activities	Time-frame*	Lead & support Institution	Link-ages
Conduct an in-depth inter-disciplinary assessment of climate change impacts on agri-workers and associated rural communities, including livelihood risks and the sufficiency of existing disaster relief mechanisms 	S	Lead: research institutions, WCG:Agriculture Support: WCG:Health, WCG:Social Development, DOL, DOHS, DRDLR, organised agriculture	3.3 3.4.2

See also Box 1: People on farms, in the SmartAgri Plan, P.29

5. Revisiting laws and policies

The policy and regulatory framework for the water sector is of great significance to the agricultural sector of the Western Cape. The combination of peak winter rainfall and peak summer water demand for crop irrigation, together with high levels of rainfall variability and regular droughts in some areas, leads to a considerable reliance on water storage capacity. Irrigated agriculture is highly dependent on water infrastructure provided by the Department of Water and Sanitation (DWS). Farmers also make use of on-farm private dams, licensed abstractions from surface (streams), and ground water sources.

Water use for agriculture (and other users) is subject to the country's National Water Act (1998). Implementation of the Act is ongoing, particularly the devolvement of decision-making to Catchment Management Agencies. National and provincial departments of environmental affairs also implement laws and regulations pertaining to the environmental linkages with water resources management (e.g. via environmental impact assessments). This system has resulted in often very lengthy and costly bureaucratic processes when farmers wish to alter their water resources management practices.

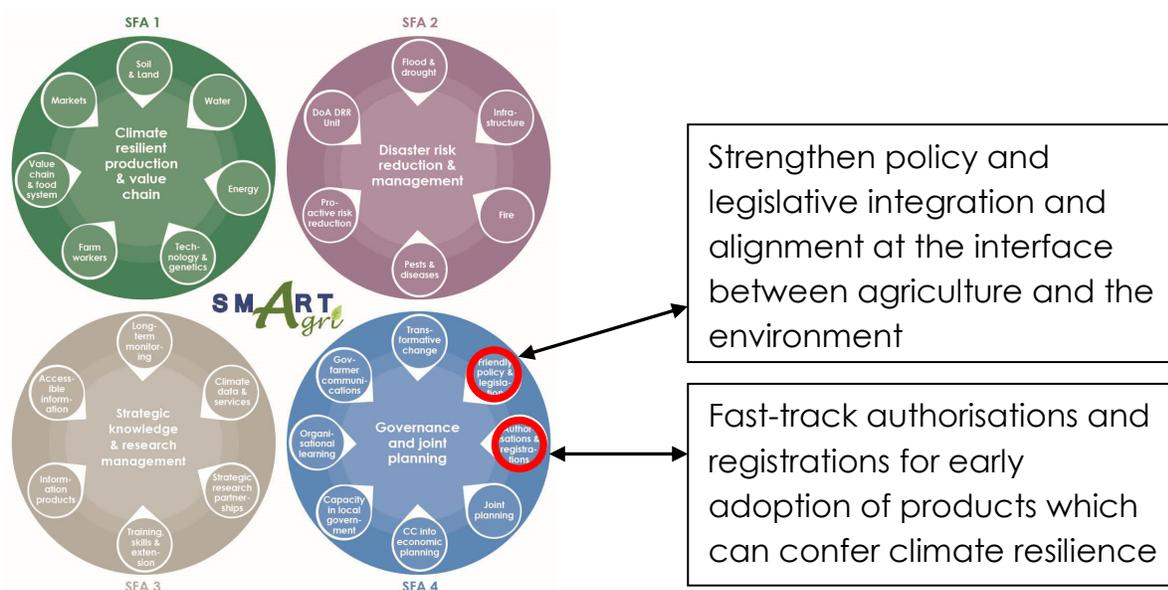
Current trends and future projections of increasingly variable rainfall, reductions in winter rainfall, more frequent droughts, shifts in the seasonality of rainfall, and warming-driven rises in evapotranspiration (and thus higher irrigation demands) are necessitating farm-level adaptive responses to water resources planning and management. In some cases the need for more water storage infrastructure (e.g. on-farm dams) or the re-use of water needs to be re-assessed. On the one hand, such assessments must be conducted properly and by the law, and on the other hand the current drought has shown that an acceleration of administrative processes is required to reduce the vulnerability of farmers.

There is an urgent need to revisit the water policies and regulations which hamper the development of water infrastructure and additional water sources, so that agriculture can adapt to changing and increasingly extreme climatic conditions. The clearing of bureaucratic bottlenecks and speeding up of regulatory decision-making could be tackled in a partnership between DWS, DEA&DP, DOA, the provincial Red Tape Reduction Unit, municipalities, and representatives of the agriculture sector. The implementation of the recommendations of the "Diagnostic Evaluation of the Impact of the Legislative Environment on the

Agricultural Sector in the Western Cape", with specific reference to the climate-relevant recommendations, would also be a good starting point.

Role players: DoA, DWS, WCG Red Tape Reduction Unit

Alignment with the SmartAgri Plan:



4.2.1 Remove legislative hurdles through sensitive re-alignment of environmental, water, and agricultural policies which enable farmers to be climate-responsive

Key enablers: Champions in Provincial and National Parliaments

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Based on detailed evidence, align provincial environmental, water, and agricultural policies, plans and laws with a view to achieving an integrated climate change response through Standing Committee processes and the working groups of Provincial Strategic Goals 1 and 4	S-M	Lead: WCG:Agriculture, WCG:EADP, working groups of Provincial Strategic Goals 1 and 4 Support: DAFF, DEA, DWS	
Engage with national government to address misalignments of climate-related national environmental, agricultural, and water-related policies and laws that are beyond the mandate of the Western Cape Province, through appropriate processes	S-M	Lead: WCG:Agriculture, WCG:EADP Support: DAFF, DEA, DWS	

4.3.2 Remove climate-relevant legislative barriers and speed up regulatory decision-making for emergency responses

Key enablers: Champion in WCG:Agriculture

Proposed Activities	Time-frame	Lead & support Institution	Link-ages
Take advantage of the red tape reduction unit at WCG:EDAT to focus attention on removing climate-relevant legislative barriers, and implement the recommendations of the Diagnostic Evaluation of the Impact of the Legislative Environment on the Agricultural Sector in the Western Cape with specific reference to the climate relevant recommendations	S-M	Lead: WCG:Agriculture Support: WCG:EDAT, WCG:EADP, commodity organisations	
WCG:EADP to fast-track decisions on requested emergency infrastructure repairs and climate-resilient reconstruction following damage caused by climate extremes	S	Lead: WCG:EADP Support: WCG:Agriculture	2.2.1

Summary diagram of the alignment between the five drought dialogue priorities and the SmartAgri Plan:

