

Western Cape Department of Agriculture



Evaluation of the Diagnostic, Design and Implementation of the Western Cape Agricultural Sector Climate Change Framework and Implementation Plan (SmartAgri)





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Name:	David Farrell
Postal address:	PO Box 12529, Die Boord, Stellenbosch 7613
Physical address:	25 Longifolia Street, Paradyskloof, Stellenbosch 7613
Telephone:	083 653 3618
Email:	david@bluenorth.co.za

Evaluation Team	SmartAgri Evaluation Steering Committee
David Farrell – Blue North	Dr Ilse Trautmann – WC-DOA
Dr Myles Oelofse – Blue North	Dr Dirk Troskie - WC-DOA
Eddie Vienings – Blue North	Dr Mike Wallace - WC-DOA
Anel Blignaut – Blue North	Goosain Isaacs – WC-DEA&DP
Kerry Saywood – Blue North	Shelton Mandondo - WC-DOA
Clare Rodseth – Blue North	Nicole Wagner - WC-DOA
Annaline Smith – Blue North	Theresa Smit - WC-DOA
Buhle Sondwana – Blue North (Intern)	Andrew Partridge - WC-DOA
	Lize Jennings-Boom – WC-DEA&DP
	Dr Kevin Kelly (WC-DOA)

Policy Summary

The SmartAgri Plan was developed in response to current and future climate change threats facing the Western Cape. Development of the SmartAgri Plan started in 2014, and implementation commenced in May 2016. Three years after its initiation, the Western Cape Department of Agriculture (WC-DOA) commissioned a diagnostic, design and implementation evaluation of the plan. The purpose was to assess the plan in terms of its relevance and design, climate change resilience outcome achievement and how the plan and its implementation can be strengthened going forward. The evaluation was based on data compiled utilising a mixed-methods approach.

Regarding the diagnostic, the evaluation finds that the process to develop the SmartAgri Plan was conducted in a systematic and scientifically grounded manner. The diagnostic informing the SmartAgri Plan's development was comprehensive and remains valid. The SmartAgri Plan response framework and implementation plan is found to be a highly relevant, innovative, well-designed, and scientifically robust plan of action for climate change resilience. However, a shortcoming of the design phase is that insufficient consideration or guidance was given as to how exactly the plan would best be adopted and implemented across the sector and/or the functions and mechanisms required to facilitate this.

The theory of change for SmartAgri was that broad dissemination of the plan would result in an uptake of the detailed activities formulated in the plan by stakeholders as considered relevant. Whilst the outcomes and vision of SmartAgri encompass the whole sector, an analysis of the implementation plan shows that the realisation of the outcomes is strongly based on government action. The emphasis of the theory of change on the adoption of SmartAgri activities by non-government role-players in the sector may thus be misplaced, and the plan is better understood as a governmental plan: A plan which, primarily through its institutionalisation within government programmes, encourages and catalyses change within the sector towards the plan's vision and goals. It is therefore important to emphasise that it is entirely to be expected that role players in the sector may be impacted by the SmartAgri Plan and be its beneficiaries without necessarily having any knowledge of the details of the plan. A thorough sectoral consultation was undertaken during design, coupled with an awareness drive in the early implementation phase (2016-2018). Despite this, the evaluation found a consistent lack of knowledge of the plan and its details among key stakeholder groupings in the sector.

Progress with implementation of the projects and activities varied, and while there is clear evidence of the institutionalisation of the plan within WC-DOA and Western Cape Department of Environmental Affairs & Development Planning (WC-DEA&DP), clear areas remain where this can be strengthened. The assessment of the six priority projects finds that a catalytic effect can be observed primarily at an institutional level for most priority projects, with some achieving sectoral effects. A gap has been the absence of an appropriately resourced operational structure for overseeing and coordinating the implementation of the plan. A detailed assessment of progress highlights successful areas of implementation as well as what may be inhibiting progress and requires refinement going forward. A SWOT analysis of the SmartAgri Plan synthesises the overall findings of the evaluation and informs seven higher-level recommendations.

The seven recommendations arise from the excellent foundation made over the implementation phase; and are formulated in a way that acknowledges the SmartAgri Plan as having its impact at farm level (and the sector) via a series of key role players. As such the recommendations take consideration of this 'ripple effect' from the plan itself, its institutionalisation within WC-DOA and WC-DEA&DP, through the sector role-players engaged in the projects and activities of the plan, and finally at farm level where it finds its ultimate impact.

Executive Summary

Background

The Western Cape Department of Agriculture (WC-DOA) commissioned a diagnostic, design and implementation evaluation of the Western Cape Climate Change Response Framework and Implementation Plan for the Agricultural Sector (SmartAgri). The purpose of the evaluation was to assess the SmartAgri Plan in terms of its relevance and design; to what extent its stated outcomes have been achieved to date; whether the sector is demonstrating greater resilience as a result of the plan's implementation; and, how the plan and its implementation can be strengthened going forward. To achieve this, the evaluation focused on assessing three broad areas; i) the diagnostic status quo review that informed the development and design of the SmartAgri Plan; ii) the design of the response framework and implementation plan; and, iii) the implementation of the SmartAgri Plan to date. The evaluation was undertaken from November 2019 to April 2020. The assessment was based on a mixed-methods approach which included a document review, 54 interviews; six case studies and six farmer focus groups.

Brief description of the SmartAgri Plan

The SmartAgri Plan was developed in response to current and future climate change threats facing the Western Cape. The objective is to provide a roadmap to ensure a low-carbon, climate-resilient agricultural sector in the Western Cape. The goal of SmartAgri is to: "To equip agriculture to respond to climate change risks and opportunities through innovation, leadership and united strategic action". The SmartAgri Plan was designed following an elaborate review of climate change and agriculture in the Western Cape. The plan consists of a response framework with four strategic focus areas (SFAs), namely: promoting climate-resilient production systems; strengthening disaster risk reduction; strengthening monitoring, data and knowledge and research; and ensuring good cooperative governance and planning for effective climate change response implementation in agriculture. A detailed implementation plan was formulated, and implementation commenced in May 2016.

Key Findings

The process of developing the SmartAgri Plan was conducted in a systematic, intentional and scientifically grounded manner, which coupled state-of-the art knowledge with stakeholder input. The diagnostic informing the SmartAgri Plan's development is concluded to be scientifically well-founded and, in general, remains valid. The SmartAgri Plan is found to be a highly relevant, innovative, well-designed and scientifically robust plan of action for climate change resilience. The evaluation finds that a shortcoming of the design phase is that there was insufficient guidance given as to how exactly the plan would best be adopted and implemented across the sector and the functions and mechanisms required to facilitate this.

The theory of change for the SmartAgri Plan was based on an assumption that broad dissemination of the plan would result in an uptake of its detailed activities by stakeholders as considered relevant. The assumption is that the achievement of the plan's objectives requires an enabling environment (provided by government) that supports, encourages and catalyses the needed changes at farm level and within the agricultural sector as a whole. Whilst the outcomes and vision of SmartAgri encompass the whole sector, an analysis of the implementation plan shows that the realisation of the outcomes is strongly based on government action. The emphasis of the theory of change on the adoption of SmartAgri activities by non-government role-players in the sector may thus be misplaced.

The plan is better understood as one which, primarily through its institutionalisation within government programmes, encourages and catalyses change within the sector towards the plan's vision and goals. It is

therefore to be expected that role players in the sector may be impacted by the SmartAgri Plan and be its beneficiaries without necessarily having any knowledge of the details of the plan. Thorough sectoral consultation was undertaken during design, coupled with an awareness drive in the early implementation phase (2016-2018). Despite this, the evaluation found a consistent lack of knowledge of the plan and its details, among key stakeholder groupings in the sector.

The priority projects assessment finds that a catalytic effect can primarily be observed at an institutional level for most priority projects, i.e. within WC-DOA, while some sectoral effects are achieved. A gap has been the absence of an appropriately resourced operational structure for overseeing and coordinating the implementation of the plan. The evaluation finds that progress with implementation of the projects and activities outlined in the implementation plan varied, and while there is clear evidence of the institutionalisation of the plan within WC-DOA and WC-DEA&DP, clear areas remain where this can be strengthened. It also finds a consistent lack of knowledge of the details of the plan and even of the plan itself among the key stakeholder groupings in the sector, including government officials, key agricultural-sector role players and farmers. Understanding the theory of change as one first requiring institutionalisation of the plan and emphasising the importance of strengthening implementation with key government departments, particularly within WC-DOA and WC-DEA&DP.

An assessment of the implementation identified areas of greater versus lesser progress in the implementation of the plan at the level of projects, objectives and SFAs. The assessment provides detailed feedback regarding implementation and highlights successful areas of implementation as well as what may be inhibiting progress and requires attention going forward. A summative SWOT analysis of the SmartAgri Plan identifies key internal aspects of the plan and its implementation as well as features of the external operating environment relevant to its ongoing implementation.

Recommendations

Seven high-level recommendations are made to improve the SmartAgri Plan. These are formulated in a way that acknowledges the plan as having its impact at farm level via a series of key role players starting with WC-DOA and WC-DEA&DP. They take consideration of this 'ripple effect' from the plan itself, its institutionalisation within WC-DOA and WC-DEA&DP, through the sector role players engaged in the activities of the plan, and to farm level where it finds its ultimate impact.

Recommendation 1. Undertake a review and update of the climatic information and related refinements to response strategies that underpin the SmartAgri Plan – particularly at the downscaled level.

Justification: As a climate change response plan, the SmartAgri Plan should be a dynamic document that reflects the latest climate-change information. Climate change data and projections are being updated constantly and this needs to be reflected in the plan. Climate change projections also need to be downscaled to at least the granularity of the Agro-climatic Zones defined in the plan to make them meaningful as a tool to guide strategies and actions in these different regions.

Recommendation 2. Undertake an internal review of the projects and activities defined in the SmartAgri Plan to assess relevance and any updating needs.

Justification: The projects and activities defined in the Smart Agri Plan are the detailed 'teeth' that underpin each objective and, to a great extent, should inform and direct the activities for each objective of WC-DOA and WC-DEA&DP which together are indicated as lead or co-lead institution for 82% of the activities in the plan. A review of the projects/activities and lead institutions to identify any additions and/or amendments required will deepen understanding of the details of the plan and support the further institutionalisation of the plan in the departments.

Recommendation 3. Institute, mandate and resource a formalised SmartAgri Plan management/oversight structure.

Justification: The absence of a formal oversight function with the necessary powers to drive the implementation of the SmartAgri Plan is a significant weakness. The two departments are the *de facto* custodians and champions of the plan and it is therefore appropriate that this oversight function resides within the domain of one or both of these departments and that staff are appointed to the oversight function with clear responsibilities and authorities. It is important to emphasise that the oversight function proposed here is to serve as a coordination/custodianship role.

Recommendation 4. Undertake a deep-dive review of each programme in the two lead departments to assess levels of adoption of the SmartAgri Plan and drive its institutionalisation within programmes.

Justification: For the SmartAgri Plan to serve as an enabler/catalyst for the sector and ultimately achieve its strategic targets, goal and vision, it must be effectively institutionalised in the thinking and activities of the two departments. The departments are identified as the lead/co-lead institutions in many activities defined in the plan and strengthening the institutionalisation of the plan within these departments represents a high-leverage opportunity to strengthen the overall implementation.

Recommendation 5. Re-engage and strengthen uptake by other provincial and national government departments identified in the SmartAgri Plan.

Justification: The SmartAgri Plan advocates transversal and inter-departmental engagement and alignment around the objectives and projects in order for it to be effective. This is currently not being achieved to the degree required. This recommendation is aimed at more actively promoting and raising awareness about the plan with the other government functions and departments identified as key role players and leads, with the intention that they play their roles more fully as anticipated.

Recommendation 6. Re-engage and strengthen uptake by Industry organisations and role players identified in the SmartAgri Plan.

Justification: The SmartAgri Plan advocates engagement, alignment and collaboration with many organisations, businesses, forums and other role players in the agricultural sector in the province. It is with these role players that many of the projects and activities of the SmartAgri Plan must be implemented and/or find their impact, and through whom the impacts of the SmartAgri Plan must be transferred to farm-level. This is currently not being achieved to the degree required. This recommendation is aimed at more actively promoting and raising awareness about the plan with the industry organisations and forums identified as key role players and leads, with the intention that they play their roles more fully as anticipated.

Recommendation 7. Adopt mechanisms to identify, promote and share farm-level innovation, learning and change towards greater adaptation and mitigation of climate change impacts.

Justification: It is the adaptation and mitigation activities taken by farmers and other land managers at farm/landscape level that will ultimately determine whether the 'high road' scenarios and the strategic goals of the plan will be achieved. Whether inspired by the projects and activities of the SmartAgri Plan itself or via the independent innovations of 'early adopter' farmers, the challenge is to identify where these innovations are happening and to promote and share these in support of their broader adoption across the agriculture sector in the province. The WC-DOA can play an important role as a collator and disseminator of these innovations.

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Abbreviations and Acronyms

ACDI	African Climate & Development Initiative, University of Cape Town
CA	Conservation Agriculture
СС	Climate Change
CCC	Confronting Climate Change project
CPUT	Cape Peninsula University of Technology
DALRRD	National Department of Agriculture, Land Reform and Rural Development
DRR	Disaster Risk Reduction
DRR&M	Disaster Risk Reduction & Management
DWS	National Department of Human Settlements, Water and Sanitation
ESC	Departmental Evaluation Steering Committee
FGD	Focus Group Discussion
GIS	Geographical Information Systems
HOD	Head of Department
M&E	Monitoring and Evaluation
МСА	Multi-Criteria Analysis
NDVI	Normalized Difference Vegetation Index
NGO	Non-Governmental Organisation
PSG	Provincial Strategic Goal
RHFA	Relatively Homogeneous Farming Area
SATI	South African Table Grape Industry
SC	SmartAgri Steering Committee
SFA	Strategic Focus Area
SIZA	Sustainability Initiative of South Africa
SmartAgri	WC Agricultural Sector Climate Change Response Framework & Implementation Plan
SWOT	Strengths, Weaknesses, Opportunities and Threats
ТоС	Theory of Change
ToR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
UCT	University of Cape Town
WC	Western Cape
WCG	Western Cape Government
WC-DOA	Western Cape Department of Agriculture
WC-DEA&DP	Western Cape Department of Environmental Affairs & Development Planning
WC-DEDAT	Western Cape Department of Economic Development and Tourism
WC-DLG	Western Cape Department of Local Government
WIETA	Wine and Agricultural Ethical Trading Association
WOSA	Wines of South Africa
WWF-SA	World-Wide Fund for Nature South Africa

1. Introduction

The Western Cape Department of Agriculture (WC-DOA) commissioned a diagnostic, design and implementation evaluation of the Western Cape Climate Change Response Framework and Implementation Plan for the Agricultural Sector (SmartAgri). Blue North Sustainability was appointed to undertake this evaluation from November 2019 to April 2020. This report serves as the culmination of this process of evaluating the SmartAgri Plan.

1.1. Purpose of the evaluation

The purpose of the evaluation was to assess the SmartAgri Plan in terms of its relevance and design; to what extent its stated outcomes have been achieved to date; whether the sector is demonstrating greater resilience as a result of the plan's implementation; and, how the plan and its implementation can be strengthened going forward.

The evaluation focused on three broad areas:

- 1) The diagnostic (investigative) processes leading to the design of the SmartAgri Plan, and a description of its implicit theory of change;
- 2) The success of SmartAgri Plan implementation processes to date;
- 3) What has been achieved in terms of implementation of the SmartAgri Plan to date.

The main questions addressed were:

- 1) To what extent are the main objectives of the SmartAgri Plan being addressed?
- 2) What are the strengths and weaknesses, opportunities and threats of the SmartAgri Plan?
- 3) Does experience in implementing the SmartAgri Plan suggest any need to rethink what needs to be addressed?
- 4) How can the SmartAgri Plan and its implementation be strengthened?
- 5) What is the most appropriate and viable log-frame and theory of change for the SmartAgri Plan, given the findings of the evaluation regarding what is proving most viable and suitable for achieving the aims of becoming a climate change resilient sector?

A key objective highlighted by the Evaluation Steering Committee (ESC) was that the evaluation should deepen the understanding of the scope and scale of adoption of the SmartAgri Plan and identify where and why it is, or is not, being implemented by targeted users.

2. Background to the SmartAgri Plan

2.1. Rationale and objective of the SmartAgri Plan

The Western Cape (WC) is a major global exporter of agricultural products responsible for a large proportion of South Africa's exports of prepared foodstuffs, fruit and vegetables. WC is identified as the South African province to be most impacted by climate change and the agriculture sector in the province is particularly vulnerable to anticipated alterations to weather patterns, with severe consequences predicted for the productivity of the sector, rural communities and the population and economy as a whole. The SmartAgri Plan was developed in response to this threat, and with the objective of providing a roadmap to ensure a low-carbon, climate-resilient agricultural sector in the Western Cape (Western Cape Government 2016a). The vision of SmartAgri is: "Leading the way to a climate resilient agricultural future for the Western Cape",

while the goal of the plan is: "To equip agriculture to respond to climate change risks and opportunities through innovation, leadership and united strategic action".

The purpose of SmartAgri is to:

- Provide a time-specific strategic roadmap to a climate-resilient agricultural sector.
- Provide spatially explicit, commodity-specific and scale-sensitive implementation pathways that are practical and effective for specific climate risks.
- Promote opportunities for the sector through climate-change adaptation and mitigation.
- Inspire farmers and agri-business to optimise decision making for a resilient and sustainable future in the face of complex and uncertain changes.
- Strengthen the enabling environment for autonomous (farmer-led) and planned (governmentled) responses.
- Facilitate a more integrated, co-ordinated and co-operative response through strong multistakeholder partnerships, networks, and knowledge sharing.
- Mobilise and direct new investments in agriculture in support of adaptation and mitigation.

2.2. Development of the SmartAgri Plan

The development of the SmartAgri Plan entailed a process as outlined in Figure 1. To build the foundation for the plan, a study was undertaken to assess and review the *status* quo of climate change and the agricultural sector of the Western Cape. The review included an assessment of central factors relating to climate change and the agricultural sector in the Western Cape including; the policy framework supporting agriculture and climate change; climate change projections; and, geographical and commodity-specific reviews and response measures for the modelled impacts. The review informed the formulation of a climate change response framework and a detailed implementation plan, the development of which also included extensive stakeholder consultation. The response framework and implementation plan were finalised in early 2016 and implementation of SmartAgri commenced in May 2016.



Figure 1. The process followed toward the development of the SmartAgri Plan

The Response Framework of the SmartAgri Plan articulates in detail the vision, goal and objectives to achieve a climate-resilient future for the agriculture sector of the Western Cape, referring to 'high road'

response scenarios. These describe a future for the sector as one of pro-active planning, decision making and implementation in the face of either incremental or rapid climate change.

The four Strategic Focus Areas are:

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

The SmartAgri Plan sets out an implementation framework with 27 objectives, 68 projects (of which six are designated as priority projects) and 178 activities with lead and support institutions identified for each (Annex A provides an overview of this framework). The plan then sets out the details of the six priority projects including financing sources and timeframes. The priority projects are:

- 1. Conservation Agriculture (CA) for all commodities and farming systems.
- 2. Restored ecological infrastructure for increased landscape productivity, socio-ecological resilience and soil carbon sequestration.
- 3. Collaborative integrated catchment management for improved water security (quality and quantity) and job creation.
- 4. Energy efficiency & renewable energy case studies to inspire the transition to low-carbon agriculture.
- 5. Climate-proofing the growth of agri-processing in the Western Cape.
- 6. Integrated knowledge system for climate-smart agricultural extension.

The implementation plan also sets out a detailed M&E framework which aligns to the structure utilised for planning. This sets out the needs and scope of an M&E framework for SmartAgri, including an M&E system design, training and guidance materials, plans for implementation, reporting and maintenance.

2.3. SmartAgri Theory of Change

The overarching goal of the SmartAgri Plan is "to <u>equip</u> agriculture to respond to climate change risks and opportunities". SmartAgri, as a government-developed and driven initiative, recognises that the achievement of long-term climate-related goals within the agricultural sector requires supportive structures and an enabling environment. The implicit theory of change of the SmartAgri Plan is presented in Figure 2. The logic underpinning SmartAgri is that knowledge of sectoral climate change impacts and vulnerability, considered over a range of geographical and temporal scales and acquired through research and ongoing learning processes (*Status Quo* review and SFA3) informs the formulation and implementation of appropriate response actions within the agricultural sector (SFA1). SFA2 seeks to ensure climate change is integrated into disaster risk planning and response structures for the agricultural sector. The actions in the SmartAgri Plan are strongly premised on collaborative and co-ordinated planning and action both within the public sector as well as between the public and private sector. This is reflected in SFA4, which seeks to ensure efficient co-operative governance and joint planning towards effective climate change response implementation for agriculture.



Figure 2. Theory of change for the SmartAgri Plan

The theory of change for SmartAgri aligns strongly with international thinking regarding how increased climate resilience can be achieved. For example, the United Nations Framework Convention on Climate Change (UNFCCC) climate change adaptation cycle includes four components: assess impacts and vulnerability, plan for adaptation, implement adaptation measures, and monitor and evaluate adaptation (UNFCCC 2019). Whilst the focus of the UNFCCC cycle is on adaptation, the SmartAgri Plan sought to explicitly integrate adaptation and mitigation thinking into the cycle.

Government actions in the SmartAgri Plan to support farmers are strongly based on climate-related knowledge generation, through research, and dissemination thereof. A central assumption is that appropriate knowledge is generated and that farmers, firstly, acquire this knowledge and, secondly, that this knowledge is translated into practice. The extent to which farmers change behaviour is based on a multitude of factors. In the literature review on building climate resilience, studies exploring farmer decision-making indicate that linear sequential processes are not followed, but rather farmers' decision making unfolds in a far more halting, incremental way, with periods of iteration and reformulation. Researchers highlight the need to understand that an individual's subjective capacity to adapt is based on cultural norms, values, beliefs, etc. and may differ significantly from levels of adaptive capacity assumed based on objective indicators such as economic wealth, access to technology, information, skills levels, etc.

Regarding implementation of SmartAgri, a core assumption in the theory of change was that the development of a comprehensive climate change response strategy and a high-quality implementation plan for the sector, and put out to the department and the sector, would be adopted by stakeholders. The theory of change was thus that the SmartAgri Plan could be viewed as a road map, where stakeholders could find their place. The SmartAgri Plan included the identification of six priority projects selected to catalyse the early adoption of important climate change response interventions with high impact. The implementation was thus guided by the detailed plan, with a view to the 'catalytic' priority projects reinforcing and accelerating the implementation of SmartAgri, which, in turn, would lead to a sector that is more climate resilient.

3. Evaluation methodology

An outline of the steps undertaken in this evaluation is presented in Figure 3. The evaluation started with an inception meeting and report to clarify the scope of the evaluation, the role of the evaluation steering committee (ESC) and the execution of the evaluation.



Figure 3. Milestones and key events in the evaluation

3.1. Stakeholder consultation

To ensure that the evaluation encompassed and considered the views of a sufficiently wide range of stakeholders, the evaluation methodology included conducting individual, semi-structured interviews, group interviews and focus group discussions (FGD). The evaluation has thus been informed by 54 interviews and six FGD. An overview of types of stakeholders interviewed is provided in Table 1 and the detailed list of interviewees is provided in Annex B.

Type of stakeholder	Interviews completed
SmartAgri Steering Committee Members	8
Diagnostic and design stakeholders (ACDI)	6
WC-DOA Officials: Implementation	14
WC-DEA&DP Officials: Implementation	2
WC-DEDAT Officials: Design and implementation	1
WC-DOA, WC-DEA&DP and WC-DEDAT HODs	3
Other Provincial Depts & Municipalities	2
Green Cape	2
Organised agriculture in WC & industry organisations	14
Other (NGOs, academics)	2

Table 1. Overview of stakeholders consulted in the SmartAgri Plan evaluation

3.1.1. Priority project case studies

For the implementation of SmartAgri, six priority projects were selected on the basis that they could catalyse or accelerate implementation of the plan, therefore the evaluation assessed the implementation of these six projects utilising a deep-dive case approach.

3.1.2. Farmer focus groups

Farmers are the ultimate beneficiaries of the SmartAgri Plan, and it was deemed important to explore the reach of the implementation activities and potential effect on farmers. Six farmer focus group interviews were conducted. In keeping with the thinking behind the SmartAgri Plan, a commodity-based and geographical focus was utilised to select six groupings of farmers to participate in the focus groups. The six areas and commodity groupings targeted and covered during data collection are outlined in Table 2.

Table 2. C	verview of	f focus	group	discussions	with	farmers
			J P			

Area and commodities	Number of participants	
1. Laingsburg: Livestock and fruit	5	
2. Southern Cape: Grain	7	
3. Southern Cape: Dairy	2	
4. Winelands: Wine and table grape	3	
5. West Coast: Vegetable and fruit	1	
6. Ceres/Breede: Fruit	6	

were integral in guiding the analysis.

3.2. Data analysis

For qualitative data analysis, a basic interpretive structure was developed in relation to the key evaluation questions, utilising the evaluation framework. The data were then reviewed and analysed using content analysis to identify emerging themes, patterns and trends.

Results were analysed in relation to the three types of assessments undertaken – diagnostic, design and implementation. The overarching evaluation questions, the theory of change and evaluation framework

For the case studies, each priority project was assessed with a strong focus on the objectives and activities for implementation detailed in the plan. The findings for each case study are presented utilising the same structure (in an addendum report), which informed a cross-case comparative analysis which synthesises findings and informs the assessment of implementation and suggestions for refinement.

For the assessment of progress of implementation of the SmartAgri Plan, a qualitative analysis was undertaken of progress at the project and objective level within each SFA. For the purposes of the synthesis report, a rubric scoring (Figure 4) was utilised, based on a rating of **progress towards achievement of each project**, and aggregated to the objective (see Annex E) and SFA level (see Table 3).



Figure 4 Rating system for implementation progress

A summative strengths, weaknesses, opportunities and threats (SWOT) analysis was conducted to identify the internal strengths and weaknesses and external factors (opportunities and threats), that may affect desired future outcomes related to the SmartAgri Plan.

3.3. Limitations

The evaluation faced constraints, primarily related to the overall timeline for the assignment, and availability of stakeholders, particularly farmers, for interviews. We do, however, consider that we managed to consult with the majority of the stakeholders we intended to, and believe that this has not had an adverse effect on the outcome or quality of the evaluation.

4. Findings: Diagnostic and Design Evaluation

The diagnostic evaluation focuses on assessing the processes undertaken in the *status* quo review (Phase 1); whilst the design evaluation focuses on Phases 2 and 3. The diagnostic and design phases, undertaken by the same service provider in an iterative manner, were intricately linked to one another, hence their assessment is presented in one section.

4.1. Terms of Reference for SmartAgri Assessment

• The strength of the partnership between WC-DOA and WC-DE&DP was a key driver for the successful initiation of efforts to develop the SmartAgri Plan. The partnership between the two departments was galvanised through an elaborate process to develop the SmartAgri Terms of Reference (ToR).

- The ToR was comprehensive and clear, and provided the design team with strong conceptual and practical guidelines about the expected deliverables while allowing some latitude in terms of ideology and approach.
- The service providers expressed appreciation for the regular interactions and constructive dialogue with WC-DOA and WC-DEA&DP which improved the outcomes of the process.

4.2. Status Quo Review Assessment

Key findings from the assessment of Phase 1, the status quo review, are presented below.

- The status quo review was compiled by a large team of climate experts, highly qualified in various areas of climate and agricultural science. The scientific quality of the status quo review is very high, providing a scientifically robust document with a detailed, evidence-based understanding required to inform the development of the response framework.
- Interviews with climate scientists indicated that the generalised models utilised during the status quo review process remain relevant, however, given progress in the field of climate science, the view is that projections need to be reviewed, particularly regarding downscaled climate projections, which are of high importance to farmer decision making.
- Interviews confirmed that stakeholder consultations undertaken during the status quo assessment were important, affirming findings of the status quo review, and contributing to a deeper and refined understanding of the status quo of the sector.
- Stakeholder consultation furthermore provided deeper insight into the huge economic pressures and policy uncertainty the sector is facing.
- The systematic process followed for the status quo review (and development of the response framework) was robust and clear, and it is the view of the stakeholders that this approach would not be done differently were it to be repeated.
- Adaptation and mitigation aspects, often treated distinctly when discussing climate change in agriculture, were deliberately not separated in the plan, as the view was that they are both components of a systemic issue and thus inseparable.
- The amount of information compiled in the status quo review, including the stakeholder feedback, was enormous. The status quo document thus was, and remains, a rich resource for all aspects relating to climate change in agriculture with a strong alignment to the WC agricultural sector.
- The massive drought in the Western Cape occurred after the diagnostic phase of SmartAgri and resulted in a diversity of response strategies. The evaluation finds that it may be useful to validate, using the experiences accrued over the course of the drought, the original risks and responses identified from the plan to re-evaluate priority areas and response strategies. Validation could explore questions such as: Are there areas of climate risk that should be not prioritised anymore? Which emerging issues may require prioritisation over the next five years? How can experience from drought responses inform a refined strategy?

4.3. Response Framework and Implementation Plan Development Assessment

Phase 2 entailed a stepwise process toward the development and formulation of a climate change response framework. The process, informed by the *status* quo review, included further stakeholder consultation, a multi-criteria analysis and a scenario and gap analysis. The assessment below focuses on

the processes followed in Phase 2, whilst the next section assesses the design of the response framework and implementation plan as well as the SmartAgri Plan itself.

- The development of the SmartAgri Plan was conducted in a systematic, intentional and scientifically grounded manner, which coupled state-of-the-art knowledge with stakeholder input.
- The coupling of the findings from the status quo review with stakeholder input is considered a strength, with participatory mapping exercises and brainstorming of priority responses contributing to a stakeholder-based grounding and refinement of the response framework and implementation plan, which provided location-specific priority responses.
- The process for the multi-criteria analysis was viewed to have been methodologically challenging. The 66 'response options' were regarded as incommensurate, as they differed fundamentally in terms of their nature, their geographical scope, the time required to implement them, as well as their potential benefits and side-effects. The prioritisation process by the experts resulted in strongly differing rankings.
- Some interviewees expressed that the design process could have included more farmers and, in particular, the inclusion of other 'types' including smallholder farmers.
- Related to this, a discussion point centred on the need for more accurate and helpful farmer typologies. This would entail a stronger understanding and differentiation of knowledge dissemination based on the spectrum of farm typologies operating within the agricultural sector in the WC (subsistence, small holder and commercial).
- Regarding design of activities, a question was raised regarding whether sufficient input, and hence buy-in, was secured from across government, particularly those tiers of government mandated to manage resources of central importance to the agricultural sector. The implication was that achieving buy-in from other departments was not always straightforward or completely successful with negative consequences for the efficiency of the implementation.
- The engagement process with municipalities during the development of the response strategy is viewed as being an important process to clarify the intersection of agriculture and municipal function, and much was reportedly achieved during the liaison with municipalities about the plan (the inclusion of climate change in municipal-planning processes is addressed further in the implementation assessment).

4.4. Response Framework and Implementation Plan Design Assessment

Phase 3 saw the formulation of the response framework and implementation plan. This section provides an assessment of the design of the SmartAgri Plan as well as its components.

- The SmartAgri Response Framework and Implementation Plan provides a coherent, deeply considered framework intended to challenge and support actors in the agricultural sector, both public and private, grappling with the development and implementation of effective climate-change adaptation and mitigation programmes-of-action within their specific contexts. It highlights what actions should be considered and why, what resources are available and where they can be found and what collaboration and coordination of effort is possible. In this sense, the response framework is viewed as being well designed and all-encompassing in terms of coverage of what is required.
- The design of SmartAgri is found to be relevant and appropriate to address the challenges identified in the status quo review. However, while the plan provides a detailed plan of action for the sector,

there was little consideration about how the implementation process (project management) was to be undertaken.

- The SmartAgri Plan is well aligned to existing international and national policy as well as provincial goals and strategies.
- As a provincial and sector-specific climate change response strategy, the SmartAgri Plan is unique in South Africa, and perhaps even globally. In this regard, the development of the plan is ground-breaking and innovative, and the initiative and foresight exuded to ensure its development is highly commendable.
- As a government-led initiative, the SmartAgri Plan understandably has a strong emphasis on activities that should/could be taken or at least facilitated/initiated by government departments (82% of the activities defined in the plan identify the WC-DOA and/or WC-DEA&DP as the lead or co-lead institution, Annex C). An implicit assumption is that the achievement of the SmartAgri Plan's objectives requires an enabling environment (provided by government) that supports, encourages and catalyses the needed changes at farm level and within the sector as a whole.
- Understanding the role of the SmartAgri Plan as a facilitating/catalysing resource (a roadmap) for the sector was strongly highlighted in interviews. The apparent theory of change for SmartAgri was that the plan would be broadly disseminated, and implementation would occur based on a 'trickle-down' theory, entailing that the uptake of detailed activities could be picked up by stakeholders as considered relevant.
- Given the above, the emphasis of the apparent theory of change on the dissemination and adoption of the activities in the plan by non-government role-players in the sector may be misplaced as it is the institutionalisation of the plan within government departments that is more essential to its ultimate success and impact with and through these role players. A distinction therefore needs to be made between the plan's proposed activities and the parties earmarked for implementing them, on the one hand, (in most cases the WC-DOA and WC-DEA&DP), and the intended impacts/outcomes of these activities and the ultimate recipients or beneficiaries of these, on the other (in most cases farmers).
- The SmartAgri Plan is not a budgeted programme, but is rather understood as a resource or 'roadmap intended to prompt and guide government departments and role players across the agricultural sector in the province towards greater resilience in the face of anticipated climate-change impacts. Its functioning as a 'roadmap' rather than a programme with an adequately resourced function to oversee and manage uptake and adoption could undermine its adoption and implementation within the government departments critical to its success.
- By assuming a commodity-based and geographically-focused approach, it was envisaged that SmartAgri could identify and foster response options tailored to the needs and capabilities of a range of farming categories and resource availability. While the commodity and geographical focus was central to the *status quo* review to understand risks and opportunities at a granular scale, explicit reference to the agro-climatic zones is only made for the priority projects and not for the other projects and activities defined in the plan.
- The scenarios developed for the plan are considered an important tool for thinking about and planning for uncertainty. Although these are presented in some detail in the plan, the linkages of the actions in the plan to the high-road scenarios has not explicitly occurred. This is evident in the fact that the scenarios are not referred to in the details of the implementation plan.

- Consideration was also given as to whether the response strategy deals sufficiently with systemic transformational challenges for agriculture over the medium term (e.g. 30 years). The strategy in the response framework was regarded by some respondents as more incremental in approach, proposing system adjustments rather than setting out how the system may need to be fundamentally transformed in light of long-term projections. The challenges in addressing longer time scales in a response strategy are acknowledged, and the plan does have a component focusing on alternative crops. However, reflection may be required regarding whether the scenario analysis has been sufficiently utilised to inform the development of medium-term strategies for the sector.
- The proposed design for the M&E framework set out in the plan and accompanying M&E document is very comprehensive, including indicators at all levels of the logical framework's results chain. However, the framework, through its level of ambition, and in spite of acknowledging the complexity of monitoring challenges, is unrealistic in terms of its alignment to government processes. The operationalisation of the framework is also unclear.
- Monitoring and learning from the implementation of the plan is an important strategic focus area, and its inclusion is central to the theory of change, where learning feedback loops contribute to an iterative refinement of the plan and its activities.
- The concept of the briefs and case studies (prepared during design phases) for farmer dissemination is still relevant and appropriate, although they require review and updating to align to current knowledge. The design and content should align with farmers' needs.
- A central component of the SmartAgri Plan theory of change was the six priority projects. The intention was that these could accelerate the implementation and uptake of the plan. However, what was perhaps missing, in terms of the theory of change was a more intentional approach to how the plan *itself* would be translated into action, i.e. the envisaged implementation structure in the departments. The priority projects were an acknowledgement that the plan needed to be catalysed and the projects were adopted to accelerate implementation. It would have been useful to include considerations regarding the specific approach to be pursued for the roll-out of the plan.

5. Findings: Implementation Evaluation

5.1. SmartAgri Implementation Structure & Institutional Arrangements

The SmartAgri Response Framework and Implementation plan was finalised and officially launched in 2016. SmartAgri has a steering committee (SC) consisting of officials from WC-DOA and WC-DEA&DP, with WC-DOA taking the lead on implementation. The SC is tasked with keeping track of SmartAgri, its implementation and actions, to ensure that momentum is maintained. Key findings regarding the implementation structure and institutional arrangements are:

- A key action taken to facilitate implementation and prioritise roll-out of the SmartAgri Plan was the appointment by the WC-DOA of an implementation expert/specialist advisor. The two-year appointment of an expert (2016-2018) is considered to have fast tracked implementation and helped the WC-DOA raise awareness of climate change and its potential impacts and to 'land' the SmartAgri plan in the sector with stakeholder-focused interventions.
- Climate change risk has been included in all the strategic and medium-term planning documents of the department (embedded in Annual Performance Plans since 2014), and SmartAgri is included in key strategic provincial plans² and goals).

- Keeping track of implementation was a regular point on the SmartAgri SC Agenda. However, while the question of how to monitor implementation was discussed in early SC meetings, a procedure for internal monitoring was never properly established.
- Whilst there is a SmartAgri SC in place to hold oversight of implementation, there is no formal function to coordinate, manage and oversee implementation.
- The SmartAgri Plan was considered a road map, and the coordination of the plan's implementation was not specifically resourced, which is undermining its implementation to some degree.

5.2. Priority Project Implementation Assessment

The six priority projects were per design planned to be 'catalytic' and thus envisaged to play a key role in the uptake and roll-out of the SmartAgri Plan. Assessing the implementation of the six projects is thus central to understanding the implementation to date. Individual summary findings for the priority project case studies are presented in Annex D¹, whilst high-level findings from the implementation assessment of the priority projects are summarised below.

- All priority projects are relevant to the achievement of the objectives of the SmartAgri Plan.
- All the priority projects build on existing departmental programmes, initiatives and/or strategic engagements.
- The extent of implementation of activities was generally found to be high, however, because most activities fall within existing/ongoing programme-level work within the WC-DOA, it was difficult to attribute the initiation and outcomes of these activities directly to the priority project as formulated in the plan. The exception here is priority project 6 (integrated knowledge systems for extension officers), which has implemented activities explicitly as a result of the activity plans in SmartAgri.
- Whilst all key contacts at the department referred to for the assessment of specific priority projects knew of the SmartAgri Plan, knowledge of the specific goals and activity plans defined for the priority project was found to be limited for most, and an explicit linkage between the SmartAgri Plan and the activities undertaken was not always made. The assessment retrospectively linked ongoing activities within the applicable programmes to the respective priority projects.
- The SmartAgri Plan was referred to by key staff within the priority projects as being of strategic importance and value for the inclusion of climate change thinking in existing work as well as general awareness raising of climate change as a cross-cutting issue in ongoing programmatic work. There was thus general acknowledgement that the SmartAgri Plan has strengthened the case for the project/programme in terms of being given sufficient resourcing and/or funding.
- The six priority projects were selected on the basis that they could catalyse or accelerate implementation of the overall plan. The assessment finds that a catalytic effect, related to the SmartAgri priority project and not the ongoing departmental programme, can be observed at an institutional level for all six projects within the Department of Agriculture. Four projects were assessed to have had a sectoral effect.

¹ A case-study report, which includes all individual case studies is provided as an Addendum to this report.

- The conservation agriculture and integrated knowledge systems priority projects have made the strongest progress in terms of being catalytic beyond the pre-existing departmental programmes associated with each.
- The institutionalisation of the SmartAgri Plan (and climate change) entails a stronger mainstreaming of climate change resilience thinking across the department. This is considered an important precursor to the broader mainstreaming of climate-smart thinking within the agricultural sector itself (i.e. amongst other stakeholders including farmers, associations, sector organisations and agri-business).
- Whilst activities embedded within the associated programmes within the department have monitoring and reporting functions, there is no monitoring, evaluation or learning function built into a dedicated SmartAgri oversight/coordinating function for any of the priority projects.
- A focus of the plan was the institutionalisation of SmartAgri/climate change resilience into departmental functions. To this end, the infusion of climate change resilience thinking into departmental processes, strategies and implementation plans is a necessary first step towards achieving climate change resilience within the sector. It is therefore imperative that the implementation of SmartAgri, through the priority projects, be viewed incrementally, where climate change resilience will be achieved over time through a 'trickle down' from the work of the WC-DOA to the sector.
- It is evident that not all the department staff identified as key contacts for each priority project were aware of the specific activities defined for the priority project. Whilst the evaluation is appreciative of a 'diffusion' approach, which entails low-cost and low resource requirements, it does heighten the risk of the 'ball being dropped', and it may be useful to find a middle ground between a more programmatic design and this diffusion approach.
- There is a risk of WC-DOA not emphasising the institutionalisation of the SmartAgri Plan and rather emphasising the communication of the plan to stakeholders. This may explain the apparent weak connection between the programmes associated with each priority project and the priority projects as key instruments of the SmartAgri Plan.
- Whilst the design and implementation of the priority projects could be open to criticism in terms of the lack of explicit linkages to the plan, it is nevertheless clear that the approach has resulted in climate change thinking becoming integrated into the work of department and its officials. As such the priority projects can be acknowledged as fulfilling a critical first step as a part of the theory of change toward catalysing the agricultural sector in the province toward great resilience.

5.3. Perspectives of role players involved in implementation

5.3.1. Government Departments

It is clear from the breakdown of implementation roles (Annex C) that the WC-DOA has a pivotal role to play in the implementation of the plan, and to a lesser degree the WC-DEA&DP. While much attention has been given as to how the SmartAgri Plan is being implemented 'in-field' above, it is its implementation and embedding within the activities of these two departments that is a key aspect of the plan's overall implementation.

With this in mind, it is important to note that the SmartAgri Plan is acknowledged broadly within the WC-DOA and WC-DEA&DP as an important strategic reference resource and there are clear indications of the institutionalisation of climate change/the SmartAgri Plan within the thinking, processes and activities of these departments. Important evidence of the plan's institutionalisation is the incorporation of climate change related targets within the Annual Performance Plans (APPs) of the department. There are, however, different levels of awareness/uptake across different functional areas within the WC-DOA specifically. Key factors that appear to be affecting this include:

- The presence or absence of a specific individual to 'champion' the plan within a functional area.
- Where such individuals exist, they tend to have been involved in the conceptualisation and design processes and have therefore provided important continuity of the plan within their functions.
- Where there has been a loss of key personnel, there appears to have been inadequate 'passing of the baton' to the next incumbent leading to a loss or break to some degree of 'institutional memory' in those functions related to the plan.

The SmartAgri Plan is well regarded within the WC-DOA and WC-DEA&DP as a galvanising strategy that has been successful in elevating the climate change agenda within these departments and made for a more coherent position on and response to climate change. The plan has also been used strategically within the WC-DEA&DP to successfully leverage funding for some programmes.

The SmartAgri Plan has served an important role in positioning the Western Cape as the leading province in South Africa in addressing climate change, and as such has, perhaps unintentionally, added political value to WC-DOA and WC-DEA&DP and the provincial government.

The SmartAgri Plan in general, and the priority projects in particular, have served to provide an important framework to elevate the profile of specific activities, even though many of these activities existed within programmes and projects prior to the formulation of the plan. The plan has provided an important strategic context, reference point and resource to these existing programmes and projects.

At WC-DEA&DP, an official who has utilised SmartAgri programmatically, was strongly aware of the value of the plan, and reflected on the need for greater awareness and mainstreaming within the department of how SmartAgri could be used as a tool. This is perhaps an example of a SmartAgri 'champion', who 'picked up upon' the plan as envisaged in the theory of change. Opportunity exists for internal capacity building of the concept of climate change resilience and how it can be integrated into programmes. An important point raised here too, was that consideration could be given to providing SmartAgri refreshers or updates on implementation to inform other departmental officials about the plan.

It is acknowledged within both the WC-DOA and WC-DEA&DP that a potential shortcoming in the implementation phase has been the absence of an appropriately resourced operational structure tasked with overseeing and coordinating the implementation.

Related to this, the evaluation explored the strategic level of engagement within higher levels of provincial government to gauge the strategic importance and prioritisation of climate change in transversal planning. Whilst it was acknowledged that climate change is a strategic risk, urgency and the level of prioritisation is limited. Prioritisation of climate change is evidently a challenge, despite the clarity of the risk level, and there is more urgency in dealing with more visible and topical provincial challenges.

5.3.2. Agricultural Sector Role Players

Role players in the sector, including grower's associations, industry bodies, non-governmental organisations (NGOs), standards bodies, research bodies/institutions, and commercial organisations in commodity valuechains (exporters and marketing organisations), although to a significantly lesser degree (Annex C), are also earmarked as lead institutions in the execution of the plan. While their role as implementing agents is technically for a smaller proportion of the activities and projects, this should not underplay their importance to the successful adoption of the plan and the achievement of its stated objectives. The plan is designed as a sectoral response to climate change which, by definition, implies its embedding and adoption of certain elements of the plan by role players across the sector as a necessary condition to its sustainability and success.

To this end, the two-year development of the plan involved extensive stakeholder engagement. This was instrumental to the formulation of the plan, particularly the identification of the role players to take lead roles in its implementation and, importantly, the development and prioritisation of the projects and detailed activities.

It is apparent that within the two government departments there is great store placed on this stakeholder engagement as both the key mechanism through which the appropriate sector input to the plan was secured, and as the means through which 'ownership' of the plan by these sector role players was secured.

However, during the course of this evaluation, it became evident that awareness of interviewees of the SmartAgri Plan ranged from, in the best cases, a clear recollection of the stakeholder-engagement process and the launch of the plan in 2016, to, at the other extreme, no knowledge of the plan at all. It should be acknowledged that almost six years have passed since the initial stakeholder consultations and there have inevitably been staff changes in the public and private sectors.

Where there was a recollection, there was real appreciation expressed for the process undertaken and the value of the plan at that time. In such instances, the plan did indeed elevate the understanding of climate change and its potential ramifications for the sector, and it did stimulate consideration of implications for various strategies and/or agendas at the time (for example, the development of internal climate-change strategies, research agendas, etc.).

This value over the course of the plan's development and launch does, however, appear to not have been sustained. There were no examples provided of organisations that utilise the plan as a strategic resource to guide their CURRENT thinking, strategies or activities.

There were also organisations interviewed (in some cases with clear roles and activities defined in the plan) that had no knowledge of the SmartAgri Plan at all. They did, however, in all cases, express a clear appreciation of the risks associated with climate change (with many making reference to the recent drought) as well as acknowledging a significant increase in the attention being given by key markets to climate change and related risks.

There was also broad consensus that the provincial government (and the Department of Agriculture in particular) has a key role to play in supporting an appropriate sectoral response. All expressed interest in the SmartAgri Plan and appreciation that such a strategy and resource is, in fact, already in place.

5.3.3. Farmers

While only specifically indicated once across the 174 detailed activities as the lead implementation agent, the SmartAgri Plan is, to a great degree, about activities that ultimately manifest in outcomes and impacts at farm level. It is the level of on-farm change towards greater resilience that is and will be the ultimate test of the effectiveness of the plan. This is so whether or not farmers have knowledge of the plan.

It is important to bear two caveats in mind, when assessing farmer's knowledge of SmartAgri. Firstly, it is entirely conceivable that farmers may be beneficiaries of activities emanating directly as a result of the SmartAgri Plan without having any knowledge of the plan itself. Secondly, given the strategic nature of climate change responses and that there have only been three years of implementation, it may be too early to wholly assess the effectiveness of SmartAgri in building climate resilience amongst farmers. A summary of key findings and their implications is provided below².

- Farmers acknowledge that climate change is a reality and that the climate patterns being experienced currently represent a shift away from the long-term patterns and are having detrimental impacts on their current mix of agricultural activities. The drought, for all the challenges it caused, can be regarded as a strong catalyst of the need to address climate risk.
- A diversity of climate-induced response strategies have been initiated by farmers. The drought brought with it a considerable shift in the practices and thinking amongst farmers. Many examples were found of farmers adapting to climatic changes and risks through an array of innovations, related to water-use optimisation and conserving soil moisture through conservation agriculture. This innovation is taking place in spite of their lack of awareness of the SmartAgri Plan. These innovations represent a significant learning opportunity for the department and sector at large.
- Considerable demand amongst farmers for new knowledge and technical advice related to reducing climate risk was observed. There is a clear opportunity for future SmartAgri activities to leverage upon this demand for knowledge.
- Farmers are facing challenges on many fronts, including electricity insecurity, rural safety issues, landreform uncertainty, economic challenges, etc., resulting in climate change being regarded as one amongst a number of challenges competing for their attention. The understanding of 'resilience' as a systemic concept that can result in deeper cross-cutting solutions to these challenges (and not just a climate change solution) is easily missed.
- Climate-induced challenges remain a constant economic threat to farmers and decision making is primarily based on a strong, short-term economic rationale, which may be contrary to longer-term climate-resilience objectives.
- What often blocks farmers' adoption of more adaptive/resilient practices is lack of clarity about the financial implications of making the required changes, leading to them holding on to what they do/know and minimising risk.
- In spite of considerable efforts by the SmartAgri team to disseminate the plan, very few of the farmers engaged with through the focus groups had any knowledge of the plan, and those with some recollection of it had only vague memories of the stakeholder-engagement processes. However, lack

² A stand-alone focus group report has been compiled as an Addendum to the evaluation report.

of knowledge of the plan does not mean that they have not been affected by the activities within the plan. For example, most of the priority projects are strongly embedded in the core activities of the WC-DOA, and, through the mainstreaming of climate change thinking, farmers will invariably have been indirectly influenced or affected by SmartAgri.

- Many farmers expressed an aversion to communication being 'pushed' to them they simply do not engage with it and prefer rather to 'pull' the information they require as and when they need it.
- Related to this, the farmers engaged in the six focus groups expressed appreciation for the opportunity to be "listened to rather than spoken to".

5.4. Assessment of Implementation Progress

SmartAgri consists of four Strategic Focus Areas (SFAs), each of which consists of a set of objectives which have affiliated projects and activities at the lowest level of the programme logic (Annex A). A narrative summary of progress is presented in the full evaluation report which provides a nuanced assessment of implementation progress and challenges, and thus informs the next steps of SmartAgri. The presentation below provides a summative assessment of implementation progress.

5.4.1. Implementation Progress at the Strategic Focus Area Level

An aggregate assessment, at the SFA level, of implementation progress (Table 3) indicates that, in general, good progress has been made with the activities outlined in the plan for SFA 1 and SFA 2, whilst SFA 3 is making fair progress, and SFA 4 is making the least progress. At this level, it is evident that activities most closely related to the programme work of the WC-DOA (in SFA 1 and SFA 2) have most traction.

SFA	Description	Rating
SFA 1	Promote a climate-resilient low-carbon production system that is productive, competitive, equitable & ecologically sustainable	0.79
SFA 2	Strengthen effective climate-disaster risk reduction and management for agriculture	0.79
SFA 3	Strengthen monitoring & data and knowledge management and sharing, and lead strategic research regarding climate change and agriculture	0.60
SFA 4	Ensure good, co-operative governance and joint planning for effective climate change response implementation for agriculture	0.40

Table 3. Aggregated assessment of implementation progress of SmartAgri SFAs.

A more nuanced understanding of areas of progress can be found by reviewing the aggregate scores at the level of SFA objectives³ (Annex E). For SFA 1, very good progress has been made for the majority of the objectives relating to soil, land, water, energy, technology and markets, but the overall SFA rating is reduced by the lack of progress on the objective of protecting agri-worker well-being. Similarly, good progress has been made for the objectives in SFA 2 for drought and flood, infrastructure, fire, pests and disease and risk reduction. For SFA 3, general good progress has been made for objectives relating to climate data, information products and accessible information, while less progress has been made for made in monitoring, training and some areas of strategic research. For SFA 4, good progress has been made for

³ The lowest level of scoring was at the activity level, hence the objective ratings are still at an aggregate level and may mask outliers in terms of good or limited progress.

objectives relating to developing capacity in local government, integrating climate change into economic development planning and communications; while limited progress was found for the objective of transformative change and authorisations and regulations.

6. SmartAgri SWOT Analysis

A summative Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis identifies factors that may affect desired future outcomes related to the SmartAgri Plan. In a SWOT, strengths and weaknesses relate to internal aspects, whilst opportunities and threats relate to external aspects.



- SmartAgri is a highly relevant, innovative, well-designed, and scientifically robust plan of action for climate change resilience.
- There is good institutional support and integration within departmental and municipal strategic processes.
- SmartAgri has contributed to an enhanced strategic awareness of climate change within the government of the Western Cape.
- Priority projects have enhanced institutionalisation of climate change and increased strategic awareness of the SmartAgri Plan and climate change in the department's functions.
- WC-DOA has exhibited a strong convenor/facilitator capability.
- The roll-out of the plan is supported by a comprehensive set of communication materials relating to climate smart agriculture.
- Efforts are underway to bolster a coordination and monitoring function of SmartAgri.



INTERNAL WEAKNESSES

- Implementation was weakened by a lack of a formal, resourced function that could coordinate the implementation of the plan and its various projects and activities.
- Limited consideration regarding how the implementation process (project management) was to be undertaken (post-design).
- A low level of awareness, utilisation and execution of the specific activity plans defined for each specific priority project.
- Limited strategic engagement in the plan by senior leadership and limited follow up in senior government leadership of the scenarios to ensure a common vision of a climate-resilient agrarian system.
- Limited governmental adoption of the plan beyond WC-DOA and WC-DE&DP provincial working groups are more of a provincial "who has done what" format that doesn't support or fast track the implementation of a plan like the SmartAgri Plan.
- There has been limited uptake of the SmartAgri Plan in spite of having been presented on numerous WCG platforms that specifically outlined opportunities for wider participation.

• No formal monitoring evaluation and learning mechanism - this was developed but was unrealistic and hence not utilised.



- Institutionalisation of the SmartAgri Plan and climate change within WC-DOA means a strong foundation has been built from which refinement and acceleration of implementation of SmartAgri can proceed.
- The impacts of climate change are being experienced in the sector, increasing the uptake and potential for change to sustainable/climate-smart practices.
- Energy insecurity is accelerating the potential for uptake of renewable energy solutions and greater energy efficiency.
- Farmers are experimenting and innovating in response to climate pressures and early adopters of climate-smart practices are helping to build the business case and providing a valuable body of evidence and knowledge for learning about best practice and general climate-change responses.
- Market pressures are increasing, leading to increased climate change awareness and uptake of climate-smart practices. The Sustainability Initiative of South Africa (SIZA) & the Wine and Agricultural Ethical Trading Association (WIETA) are having to look at strengthening climate change within their standards schemes.
- Research funds and resources are in place with potential for more allocation towards longerterm climate change related research.
- Opportunities exist for greater integration of climate change/climate-smart agriculture in the curriculum at Elsenburg College.
- Farmers, industry associations, private companies and other role players in the sector hold WC-DoA in high regard and acknowledge that the department personnel are approachable and easy to liaise with.
- Technology is supporting the shift to 'sustainable' farming practices, for example Sentinel 2 satellite & frequency Normalized Difference Vegetation Index (NDVI) data available to the WC-DOA.
- Various industry organisations have offered their communications & media channels to support the communication of the SmartAgri Plan and related resources to their members/constituents.
- SmartAgri has a large amount of dissemination materials and a large knowledge base from which refined communication material can be prepared and disseminated to farmers.
- Governmental as well as private-sector responses to climate change stresses are occurring beyond the confines of the plan, which contribute to the overarching goals of the plan.

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EXTERNAL THREATS

- Farmers, industry associations, private companies and other role players in the industry have limited knowledge of the SmartAgri Plan.
- Important sector role players such as SIZA, WIETA and Wines of South Africa (WOSA) are not aware of SmartAgri.
- Generally, there is a slow pace of change at farm-level: There is still a strong reliance and confidence in conventional practices that may impede the exploration and adoption of climate-smart practices.
- There is limited 'institutional maturity' within provincial government departments to deal with the level of transversality proposed in the SmartAgri Plan. There are already many different meeting/engagement-forums in place which reduces the appetite and capacity for transversal engagement.
- National government departments and their functioning can present obstacles; for example the WC-DOA only plays a contributory role in processes of land-use planning which rests with the National Department of Agriculture, Land Reform and Rural Development (DALRRD); and water infrastructure and water-resource management is under the control of national government (National Department of Human Settlements, Water and Sanitation).
- The high variability in conditions between farms and regions as well as the pace of climate change makes for a challenging research environment. As retailers increase their interest in the climate change agenda, multiple standards schemes imposed by markets can create confusion and additional cost to farmers that reduces their openness to the SmartAgri Plan.
- Climate change related communication is increasing in general and could 'drown out' communication about the plan.
- There is also general uncertainty in the sector related to 'other' pressing issues that distract from the resilience/climate-change agenda (land, labour, energy security, etc.).
- There is an awareness of the rapid pace of change and a concern that the plan may become outdated and may be too static.

7. Conclusion

The evaluation sought to assess the SmartAgri Plan in terms of its relevance and design; to what extent its stated outcomes have been achieved to date; whether the sector is demonstrating greater resilience as a result of the plan's implementation; and, how the plan and its implementation can be strengthened going forward. To achieve this, the evaluation focused on assessing three broad areas; i) the diagnostic status quo review which laid the foundation for the development and design of the SmartAgri Plan; ii) the design of the response framework and implementation; and, iii) the implementation of the SmartAgri Plan to date.

The development of the SmartAgri Plan was conducted in a systematic, intentional and scientifically grounded manner, which coupled state-of-the art knowledge with stakeholder input. The diagnostic was undertaken by a large team of scientists with expertise across relevant disciplines, and is thus concluded to be scientifically well-founded.

The SmartAgri Plan response framework and implementation plan is found to be a highly relevant, innovative, well-designed and scientifically robust plan of action for climate-change resilience. A shortcoming of the design phase is that insufficient consideration or guidance was given as to how exactly the plan would best be adopted and implemented across the sector and/or the functions and mechanisms required to facilitate this.

The response framework is viewed as being all-encompassing in terms of coverage of what is required. In this sense, the design of the response framework remains valid and relevant to the ongoing achievement of the overarching goal of the plan.

The apparent theory of change for the SmartAgri Plan was based on an assumption that a broad dissemination of the plan would result in an uptake of the detailed activities formulated in the plan by stakeholders as considered relevant. The assumption is that the achievement of the SmartAgri Plan's objectives requires an enabling environment (provided by government) that supports, encourages and catalyses the needed changes at farm level and within the agricultural sector as a whole.

However, the emphasis of the apparent theory of change on the adoption of the activities in the plan by non-government role-players in the sector may be misplaced. It is rather the institutionalisation of the plan within government departments that is more essential to its ultimate success and impact with and through these role players.

A distinction therefore needs to be made between the plan's proposed activities and the parties earmarked for implementing them, on the one hand. (mostly the WC-DOA and WC-DEA&DP), and the intended impacts/outcomes of these activities and the ultimate recipients or beneficiaries, on the other (in most cases farmers). In this regard, it may thus be important to view the implementation of SmartAgri more as a government-entrenched plan. In light of this, it is also to be expected that role players in the sector may be impacted by the SmartAgri Plan and be its beneficiaries without necessarily having any knowledge of the details of the plan itself.

The evaluation finds that progress with implementation of the projects and activities outlined in the implementation plan varied, and while there is clear evidence of the institutionalisation of the plan within WC-DOA and WC-DEA&DP, there remain areas where this can be strengthened. It also finds a consistent lack of knowledge of the details of the plan and even of the plan itself among the key stakeholder groupings in the sector, including government officials, key agricultural-sector role players and farmers.

Understanding the theory of change as one first requiring institutionalisation of the plan, places these findings in the right perspective; decreasing concern over the apparent lack of knowledge of the plan and emphasising the importance of strengthening implementation with key government departments, in particularly within WC-DOA and WC-DEA&DP.

The assessment of the six priority projects finds that a catalytic effect can primarily be observed at an institutional level for most priority projects, i.e. within the Department of Agriculture, while some achieved sectoral effects. This is primarily based on strong responses regarding the strategic and awareness-raising importance attributed to SmartAgri, rather than at an activity or priority project level. A resource person was employed for the first two years to facilitate the roll-out of SmartAgri. However, it is acknowledged that

a gap has been the absence of an appropriately resourced operational structure for overseeing and coordinating implementation.

The evaluation explored perspectives of key stakeholder groupings related to the implementation of the plan. This includes perspectives of government officials, key agricultural-sector role players and farmers. A deep assessment of the implementation of all objectives related to the four SFAs was undertaken based on this feedback. With a view to informing refinement of ongoing implementation, this assessment highlights successful areas of implementation, as well as what may be inhibiting progress and hence should be refined going forward.

A SWOT analysis of the SmartAgri Plan draws on the overall findings of the three types of evaluation. The SWOT analysis identifies key areas of opportunity for the ongoing implementation of the plan, whilst higher-level recommendations are provided in the next section.

8. Recommendations

Seven high-level recommendations are made, summarised in Figure 5. The recommendations are depicted in this way to show how the SmartAgri Plan has its impact at farm level via a series of key role players – the recommendations take consideration of this 'ripple effect' and are made at each level, from the plan itself through to farm level. The first two high-level recommendations relate to reviewing and 'refreshing' the plan; the third and fourth are focused on supporting the institutionalisation of the plan within the WC-DOA and WC-DEA&DP as the two main implementing agents; the fifth and sixth are focused on strengthening alignment and engagement around the plan respectively in other government departments (provincial and national) and with the key organisations & role players; and, the seventh and final recommendation is focused on supporting the required innovation and change at farm-level. Proposals for detailed actions which could support the achievement of each recommendation are provided in Annex F.



Figure 5. Summary of Recommendations for the SmartAgri Plan

Recommendation 1.

Undertake a review and update of the climatic information and any required refinements to response strategies that underpin the SmartAgri Plan – particularly at the downscaled level.

Focus	The SmartAgri Plan
Justification:	As a climate-change response plan, the SmartAgri Plan should be a dynamic document that reflects the latest climate-change information. Updated climate-change data and projections need to be reflected in the plan. Climate change projections also need to be downscaled to at least the granularity of the Agro-climatic Zones defined in the plan to make them meaningful as a tool to guide strategies and actions in these different regions.

Recommendation 2.

 Undertake an internal review of the projects and detailed activities defined in the SmartAgri Plan to assess relevance and any needs for updating requirements.

 Focus
 The SmartAgri Plan

Justification:	The projects and activities defined in the SmartAgri Plan are the detailed 'teeth' that
	underpin each of the objectives and, to a great extent, should inform and direct the activities

of WC-DOA and WC-DEA&DP (indicated as lead or co-lead institution for 82% of the activities
in the plan) for each objective. A review of the projects/activities and lead institutions to
identify any additions required and/or amendments will deepen understanding of the details
of the plan; support the further institutionalisation of the plan in the departments; and, inform
the engagement as proposed in Recommendations 5 and 6.

Recommendation 3.

Institute, mandate and resource a formalised SmartAgri Plan management/oversight structure.			
Focus	WC-DOA and WC-DEA&DP		
Justification:	The absence of a formal oversight function with the necessary powers to drive the implementation of the SmartAgri Plan is a significant weakness. The two departments are the <i>de facto</i> custodians and champions of the SmartAgri Plan and it is therefore appropriate that this oversight function resides within the domain of one or both of these departments and that staff are appointed to the oversight function with clear responsibilities and authorities. It is important to emphasise that the oversight function proposed here is not an implementation function but rather a coordination/custodianship role.		

Recommendation 4.

Undertake a deep-dive review of each programme in the two lead departments to assess levels of adoption of the SmartAgri Plan and drive towards institutionalisation within each department's programmes.

Focus	WC-DOA and WC-DEA&DP
Justification:	For the SmartAgri Plan to serve as an enabler/catalyst for the sector and ultimately achieve its strategic targets, goal and vision, it must be effectively institutionalised in the thinking, projects and activities of the two departments (and their respective programmes. The two departments are identified as the lead or co-lead institutions in 82% of the detailed activities defined in the plan and strengthening the institutionalisation of the plan within these departments represents a high-leverage opportunity to strengthen implementation overall.

Recommendation 5.

Re-engage and strengthen uptake by other provincial and national government departments identified
in the SmartAgri Plan.

Focus	Western Cape and national government departments (incl. local government)		
Justification:	The SmartAgri Plan advocates transversal and inter-departmental engagement and alignment around its objectives and projects for it to be effective. This is currently not being achieved to the degree required. This recommendation is aimed at more actively promoting and raising awareness about the plan with the other government functions and departments		

specifically identified as key role players and leads, with the intention that they more fully
play their roles as anticipated in the plan.

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Recommendation 6.

Re-engage and strengthen uptake by Industry organisations and role players identified in the SmartAgri Plan.		
Focus	Industry organisations and other role players within the agricultural sector.	
Justification:	The SmartAgri Plan advocates engagement, alignment and collaboration with many organisations, businesses, forums and other role players in the agricultural sector in the province. It is with these role players that many of the projects and activities of the SmartAgri Plan must be implemented and/or find their impact, and through whom the impacts of the SmartAgri Plan must be transferred to farm-level. This is currently not being achieved to the degree required. This recommendation is aimed at more actively promoting and raising awareness about the plan with the industry organisations and forums specifically identified as key role players and leads, with the intention that they more fully play their roles as anticipated in the plan.	

Recommendation 7.

Adopt mechanisms to identify and mainstream farm-level innovation, learning and change.		
Focus	Farmers	
Justification:	It is the adaptation and mitigation activities taken by farmers and other land managers at farm/landscape level that will ultimately determine whether the 'high road' scenarios described in the plan and the strategic targets, goal and vision will be achieved. Whether inspired by the projects and activities of the SmartAgri Plan itself or via the independent innovations of 'early adopter' farmers, the challenge is to identify where these innovations are happening and to promote and share these in support of their broader adoption across the agriculture sector in the province. The WC-DOA can play an important role as a collator and disseminator of these innovations.	

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Annex A: Overview of SmartAgri SFAs and related objectives

SFA	#	Objectives	
SFA1	1.1	Promote climate-smart soil and land-use management practices	
Promote a climate-	1.2	Promote effective, efficient and sustainable management and use of water	
resilient low-carbon	1.3	Promote efficient use of energy and development of renewable energy sources	
production system	1.4	Develop and promote access to climate-smart technology and genetic material	
that is productive,	1.5	Protect agri-worker wellbeing	
competitive,	1.6	Build climate-resilient, low-carbon and responsive agricultural value chains and	
equitable and		food system	
ecologically	1.7	Develop and protect agricultural markets in a shifting climate	
sustainable across			
the value chain			
SFA2	2.1	Integrate climate change into joint disaster planning & strengthen disaster relief	
Strengthen effective	2.2	Protect agriculture's physical and ecological intrastructure from climate disasters	
climate-disaster risk	2.3	Build local capacity in firefighting and fire risk reduction	
reduction and	2.4	Strengthen co-operative systems to monitor and respond rapidly to pest- and	
management for	management for disease-related crises brought on by climate change		
agriculture	2.5	Incentivise proactive climate change disaster risk reduction	
	2.6	Strengthen and optimise the WCG: Agriculture's role in the bigger DRR&M system	
SFA 3	3.1	Conduct long-term monitoring of parameters relevant to agriculture and climate	
Strengthen		change	
monitoring and data	3.2	Strengthen climate data and services for agriculture	
and knowledge	3.3	3 Lead strategic research partnership	
management and	3.4	Training and skills development and extension for climate-smart farming	
snaring, and lead 3.5 Develop user-friendly information products relating to climate change of		Develop user-friendly information products relating to climate change and	
strategic research		agriculture	
change and 3.6 Provide easy access to information products relating to climate change		Provide easy access to information products relating to climate change and	
agriculturo		agriculture	
	41	Enable conject leadership to envision a transformed climate resilient future agrarian	
317.4	4.1	system in the long-term	
Ensure good co-	12	Strengthen policy and legislative integration and alignment at the interface	
operative	7.2	between agriculture and the environment	
avernance and joint 4.3 East-track authorisations and registrations for early adoption of products which		East-track authorisations and registrations for early adoption of products which can	
planning for effective		confer climate resilience	
climate change	4.4	Transversal joint planning and implementation at provincial and local level	
response	4.5	Integrate climate change risk assessment and reduction into all economic	
implementation for development planning			
agriculture 4.6 Develop capacity in climate change and gariculture at local government		Develop capacity in climate change and gariculture at local government level	
	4.7	Develop linked M&E system for provincial/sectoral climate change response plans	
		and establish processes for organisational learning	
	4.8	Improved communications channels between farmers and government	

Annex B: List of interviewed stakeholders

Name of interviewee	Institution/Organization
Dr Ilse Trautmann	WC-DOA
Mike Wallace	WC-DOA
Andrew Patridge	WC-DOA
Dr Johann Strauss	WC-DOA
Mr Francis Steyn	WC-DOA
Ms Ashia Petersen	WC-DOA
Ms Rashidah Wentzel	WC-DOA
Dr Dirk Troskie	WC-DOA
Jan Theron	WC-DOA
Phyllis Pienaar	WC-DOA
Jody Wentzel	WC-DOA
Nicole Wagner	WC-DOA
HOD Joyene Isaacs	WC-DOA
Bongiswa Matoti	WC-DOA
Dr Mogale Sebopetsa	WC-DOA
Ms Hayley Rodkin -	WC-DOA
Peter Keuck	WC-DOA
Melanie Tilling	WC-DOA
Rudolph Roscher	WC-DOA
Mr Goosain Isaacs	WC-DEA&DP
Lize Jennings-Boom	WC-DEA&DP
HOD Piet van Zyl	WC-DEA&DP
Albert Ackhurst	WC-DEA&DP
Sarah Birch	WC-DEA&DP
Wilna Kloppers	WC-DEA&DP
Helen Davies	WC-DEDAT
Nabeel Rylands	WC-DLG
Quinton Balie	Cape Winelands District Municipality
Rulien Volschenk	Overberg District Municipality
Inge Kuschke	Green Cape
Cathy Pineo	GetSmarter-UCT (Former Green Cape)
Peter Johnston	UCT
Nadine Methner	UCT
Anton Carthwright	Econologic-UCT
Dr Stephanie Midgely	ACDI
Prof. Mark New	ACDI
Dr. Francois Lategan	СРИТ
Linda Lipparoni	WIETA

Wiehan Steyn	HORTGRO
Tarryn Wettergreen	SATI
Ruaan Schutte	Grain SA
Anel Andrag	Winetech
Retha Louw	SIZA
Maryna Calow	WOSA
Shelly Fuller	WWF-SA Agriculture
Scott Drimie	Food Lab
Barry Meijer	Meijer's Rust (Farmer)
Eric Leong Son	Distell
Dawie Van Der Westhuizen	Parmalat
Lizanne Rossouw	Stems Fruit
Louise Human	Core Fruit
Anel Blignaut	CCC/Blue North
Annaline Smith	FruitLook/eLEAF/Blue North

Annex C: Stakeholder implementation roles in SmartAgri

Table C shows the main groupings of institutions or role players identified in the plan as having a lead role in executing the plan, the number of times the institution or grouping is identified for a lead against the 177 detailed activities in the plan; and, the share (%) of the plan of that grouping.

Grouping (according to the recommendation groupings)	Number of activities identified as lead or co- lead (of 177)	% of activities in the plan
WC-DOA & WC-DEA&DP	145	82%
Other government departments (Provincial and National)	33	19%
Sector organisations and role players	66	37%
Farmers & farmer organisations	6	3%

Table C. Breakdown of stakeholder implementation roles of the SmartAgri Plan*

* There is often more than one institution identified as lead, so there is overlap. The percentages are not a share of each other (i.e. don't add to 100), but rather a share of the activities where the grouping is identified in a lead role.

Annex D: Cross-cutting analysis of the six SmartAgri Priority Projects

PP short name	Relevance	Clear roles?	Internal/external	Implementation	Farmer reach	Attribution	Additionality	M&E	Catalytic?
1. Conservation Agriculture (CA)	High	Yes, knowledge of activities & strategic	Both: strong internal focus	High	High	Low/medium	Strategic focus and CC awareness raising	No	Institutional, sectoral
2. Restored ecological infrastructure	(High)*	Yes, activities and strategic	Both: strong internal focus	High	High	Medium/high	Strategic focus and CC awareness raising	No	Institutional, sectoral
3. Integrated catchment management	(High)	Yes, but mainly strategic	Both: strong internal focus	Low	n/a	Low	Strategic focus, CC awareness raising and improved collaboration	No	Institutional
4. Energy efficiency and renewable energy	High	Yes, knowledge of activities & strategic	Both	High	High (indirect)	Medium	Awareness raising	No	Institutional, sectoral
5. Climate- proofing agri- processing	High	No	Both: strong internal focus	Low	High (indirect)	Low	Strategic focus	No	Institutional
6. Integrated knowledge system	High	Yes, knowledge of activities & strategic	Both: strong internal focus	High	Good reach (emerging farmer level)	High	Strategic, implementation, CC awareness	No	Institutional, sectoral

* There is overlap between Project 2 and 3. Whilst both relevant, the overlap entails that a realignment or concatenation of the two may be required; **Add-on to activities of Agri Parks programme not realised.

Key: Relevance: What is the relevance of the priority project to the objectives SmartAgri Plan? **Clear champion:** Is there a specific official, tasked with implementation, and what is the level of knowledge of the priority project implementation plan?; **Internal or external focus:** Do the priority project activities focus primarily on strengthening the department internally, or is there an external sectoral focus?; **Implementation:** What is the extent of implementation of specific priority activities as formulated in the SmartAgri Plan?; **Attribution:** To which extent can the implementation of the priority project activities be attributed to SmartAgri Plan or were the activities implemented regardless of SmartAgri?; **Additionality:** What has the priority project added to the ongoing programmatic work?; **Farmer reach:** Have the activities of the priority project either been taken up by farmers or influenced practices?; **M&E:** Are the activities of the priority project effect: To which extent and how has <u>the priority project</u> (and not the programme itself) had a catalytic effect on the mainstreaming of SmartAgri?

Annex E: Implementation Progress Rating for each SmartAgri objective

SFA	#	Focus Area	Objective	Rating
	1.1	Soil & Land	Promote climate-smart soil and land-use management practices	0.94
	1.2	Water	Promote effective, efficient and sustainable management and use of water	0.90
_	1.3	Energy	Promote efficient use of energy and development of renewable energy sources	0.92
FA	1.4	Techn. & Genetics	Develop and promote access to climate-smart technology and genetic material	0.95
S	1.5	Farm workers	Protect agri-worker wellbeing	
	1.6	V. chain & food systems	Build climate-resilient, low-carbon and responsive agricultural value chains and food system	0.82
	1.7	Markets	Develop and protect agricultural markets in a shifting climate	0.75
	2.1	Flood & drought	Integrate climate change into joint disaster planning & strengthen disaster relief mechanisms	0.92
	2.2	infrastructure	Protect agriculture's physical and ecological infrastructure from climate disasters	1.00
7	2.3	Fire	Build local capacity in firefighting and fire risk reduction	1.00
SFA	2.4	Pests & diseases	Strengthen co-operative systems to monitor & respond to pest- & disease-related crises brought on by CC	0.83
•	2.5	Pro-active risk reduction	Incentivise proactive climate-change disaster risk reduction	0.50
	2.6	DoA & DRR Unit	Strengthen and optimise the WCG: Agriculture's role in the bigger Disaster Risk Reduction & Management (DRR&M) system	0.63
	3.1	Long-term monitoring	Conduct long-term monitoring of parameters relevant to agriculture and climate change	0.25
	3.2	Climate data & services	Strengthen climate data and services for agriculture	0.92
4 3	3.3	Strategic research partn.	Lead strategic research partnership	0.38
SF/	3.4	Training, skills & extension	Training and skills development and extension for climate-smart farming	0.38
	3.5	Information products	Develop user-friendly information products relating to climate change and agriculture	1.00
	3.6	Accessible information	Provide easy access to information products relating to climate change and agriculture	0.75
	4.1	Transformative change	Enable senior leadership to envision a transformed climate-resilient future agrarian system in the long-term	
	4.2	Friendly policy & legisl.	Strengthen policy and legislative integration & alignment at the interface of agriculture and the environment	0.50
	4.3	Authorisations & registr.	Fast-track authorisations and registrations for early adoption of products which can confer climate resilience	
4	4.4	Joint planning	Transversal joint planning and implementation at provincial and local level	0.42
SFA	4.5	CC into econ. planning	Integrate climate-change risk assessment and reduction into all economic development planning	1.00
•	4.6	Capacity in local govt	Develop capacity in climate change and agriculture at local government level	1.00
	4.7	Organisational learning	Develop linked M&E system for provincial/sectoral CC response plans and establish processes for organisational learning	0.25
	4.8	Govt communications	Improved communications channels between farmers and government	0.75

Annex F: Detailed actions proposed for each recommendation

Recommendation 1.

Undertake a review and update of the climatic information and related refinements to response strategies that underpin the SmartAgri Plan – particularly at the downscaled level.

1.1	Review the latest climate change projections to identify any changes that should be reflected in the plan and/or supporting resources (e.g. commodity briefs).
1.2	Review the latest downscaled projections for the agro-climatic zones to identify any changes that need to be reflected in the plan and/or supporting resources.
1.3	Determine the possibility of securing an updated and more granular downscaled climate model output. If there is, this should be made available through the various communications resources (e.g. GreenAgri Portal, CapeFarm Mapper, etc.).

Recommendation 2.

Undertake an internal review of the projects and activities defined in the SmartAgri Plan to assess relevance and any updating requirements.

2.1	Drawing on the evaluation assessment, conduct departmental reviews of the projects and activities against each objective as well as the proposed lead institutions for each Strategic Focus Area – to be guided by questions that include; Are these elements still relevant?; What modifications are needed?, What should be added or deleted?; Are the lead institutions still appropriate?, What other institutions should be added?"
2.2	Update the SmartAgri Plan to reflect any amendments to the projects, activities or proposed lead institutions.

Recommendation 3.

Institute, mandate and resource a formalised SmartAgri Plan management/oversight structure		
3.1	Establish and mandate a formal management/oversight structure.	
3.2	Develop a distinct operating budget to enable the structure to be suitably resourced and able to undertake its work.	
3.3	Appointed dedicated personnel into the oversight function with clear responsibilities and authorities.	
3.4	A key function of an oversight function must be to establish an appropriate monitoring, evaluation and learning framework that can inform the ongoing refinement of the SmartAgri Plan and its implementation.	

Recommendation 4.

Undertake a deep-dive review of each programme in the two lead departments to assess level of and drive towards institutionalisation.

4.1	Determine which projects and activities in the plan are relevant to which programmes and sub-programmes (this has largely been done through the course of this evaluation).
4.2	Undertake a strategic review of each applicable programme and sub-programme to determine areas of traction as well as misalignment or gaps.
4.3	Develop improvement plans with each programme or sub-programme to drive the integration/alignment of the plan's projects & activities within their work streams/activities.
4.4	Develop the feedback/accountability mechanisms between the management structure (Recommendation 3) and the programmes and their efforts at institutionalising the SmartAgri Plan.

Recommendation 5.

Re-engage and strengthen uptake by other provincial and national government departments identified in the SmartAgri Plan.

5.1	Identify all provincial (including local government) and national government departments that are identified in the SmartAgri Plan and are key role players in achieving the resilience strategic objectives of the plan (this has largely been done through the course of this evaluation).
5.2	Undertake a process of engaging with each of these departments/functions to reintroduce them to the plan and their roles within it.
5.3	Agree with each department/function on the channels of communication to be used between the management structure (Recommendation 3) and themselves in order to assist productive communication and coordination of efforts regarding the implementation and institutionalisation of the SmartAgri Plan.

Recommendation 6.

Re-engage an SmartAgri Plan.	d strengthen uptake by industry organisations and role players identified in the
6.1	Identify all key sectoral role players in the achievement of the Strategic Objectives of the SmartAgri Plan (this has largely been done through the course of this evaluation as well as the compilation of the plan itself).
6.2	Undertake a process of engaging with each of these role players to reintroduce them to the plan and their roles within it.

6.3	Agree with each role player on the channels of communication to be used between the management structure (Recommendation 3) and themselves in order to assist productive communication and coordination of efforts regarding the SmartAgri Plan.
6.4	Implement a biennial climate-change review forum that brings the WC-DOA and WC-DEA&DP together with industry organisations and role players to review and update climate change challenges and responses.

Recommendation 7.

Adopt mechanisms to identify, promote and share farm-level innovation, learning and change towards greater adaptation and mitigation of climate change impacts.

7.1	Review the feasibility of a research funding model specifically designed to stimulate/support small-scale climate change related research and innovation on farms. If this is feasible it can be offered as part of 7.4.
7.2	Undertake a review of all the resources and tools available to farmers via the Elsenburg and GreenAgri Portal websites to determine if updating is required and to make necessary updates (for example, refreshing the commodity briefs to reflect latest climate- predictions data).
7.3	Create a consolidated point on the GreenAgri Portal and Elsenburg websites where all the resources can be more easily accessed by users.
7.4	Communicate the resources/tools available – create awareness of the resources from which farmers can 'pull' the information they need as and when they need it.
7.5	Undertake a study to identify the different forums used by farmers in different commodities and agro-climatic zones (e.g., study groups) with a view to identifying the best structures through which to support local/regional learning (Action 7.6)
7.6	Participate in the forums identified in 7.5 to facilitate engagement between farmers and promote the sharing and review of climate change adaptation/mitigation innovations and to make farmers more aware of the relevant resources available from WC-DOA.
7.7	Evaluate the potential of different risk-assessment tools that can aide farmers to think holistically about their farming systems, to identify systemic risks and define the 'improvement pathways' towards greater resilience appropriate to their farms. Selected tools can be deployed in support of Action 7.6.
7.8	Train extension support services to make farmers aware of the resources and processes that are available from WC-DOA in support of farm-level innovation (research funding opportunities, the resources available, the study group forums that they can join, available risk-assessment tools, etc.).