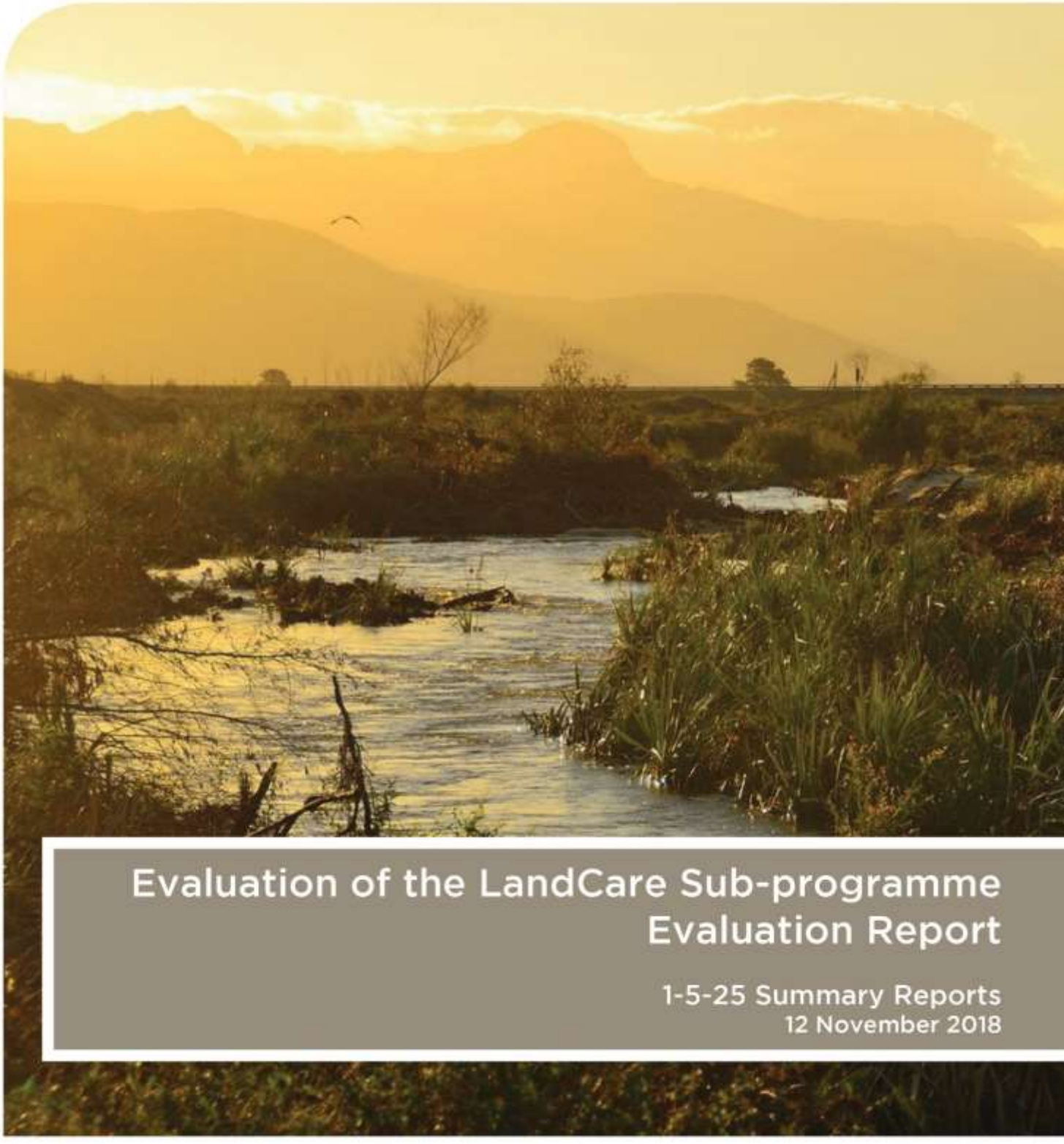
Western Cape Government

Agriculture



Evaluation of the LandCare Sub-programme Evaluation Report

1-5-25 Summary Reports

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Acronyms

ABI	Agulhas Biodiversity Initiative
AWP	Area Wide Planning
BGCMA	Breede-Gouritz Catchment Management Agency
CASIDRA	Cape Agency for Sustainable Integrated Development in Rural Areas
CMA	Catchment Management Agency
CARA	Conservation of Agricultural Resources Act
CSD	Central Supplier Database
CSC	Corporate Services Centre
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DEADP	Department of Environmental Affairs And Development Planning
DRLDR	Department of Rural Development and Land Reform
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
FSD	Farmer Support and Development
GVB	Grootvadersbosch Conservancy
MMP	Maintenance Management Plan
MTSF	Medium-Term Strategic Framework
MoA	Memorandum of Agreement
NEMBA	National Environmental Management: Biodiversity Act
NEMA	National Environmental Management Act
NLP	National LandCare Programme
NWA	National Water Act
NRM	Natural Resource Management
PSC	Project Steering Committee
SFA	Strategic Focus Areas
SRM	Sustainable Resource Management
SRMC	Sustainable Resource Management Committee
TAG	Tesselaarsdal Action Group
TOC	Theory of Change
UBCEG	Upper Breede Collaborative Extension Group
WC DoA	Western Cape Department of Agriculture
WFW	Working for Water
WUA	Water User Associations
WWF-SA	World Wildlife Fund- South Africa

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Policy summary

The Western Cape Department of Agriculture (WC DoA) commissioned PDG, in collaboration with Blue North, to undertake an evaluation of the LandCare sub-programme for the WC DoA from April to November of 2018. The purpose of the evaluation was to assess the current LandCare model's results with a view to documenting its optimal theory of change. The evaluation sought to determine the contribution of the WC DoA's LandCare programme to the social, agricultural-economic and environmental outcomes in a selection of cases.

The evaluation concludes that the LandCare model is unique among related programmes as it employs an adaptive management approach and methodology that operates with an intentional agility. It has found that this adaptive approach and the complexity of the interfacing social, economic and environmental systems in which LandCare operates lends itself to contextually informed responses to agricultural-environmental issues in partnership with a diverse range of actors, employing a "whole-of-society-approach" on the ground.

Despite LandCare's unique and distinct theoretical informants, the WC DoA has not been clear or coherent in approaching areas of intervention systematically in terms of the inter-related social, agricultural-economic and environmental outcomes it seeks to achieve. The lack of a programmatic approach has been most apparent in terms of achieving social outcomes, the instrumental "core" of the programme's intervention theory. Deliberate agricultural-environmental network formation and enhanced environmental stewardship are intended to distinguish LandCare outcomes from among other similar interventions. Although the social sphere is a common point of entry, the lack of a more explicit intention has resulted in limited apparent change in social outcomes in cases of implementation. Where there were existing networks and social capital these were tapped into, leveraged, and reinforced, but this was not done as part of a conscious and coordinated set of inter-related LandCare activities aiming to improve outcomes in the social sphere.

When taking climate change strategies and policy such as the Smart-Agri Plan into account, it is clear that some of the work that LandCare does is squarely in line with this and contributes to mitigation and environmental resilience. However, the lack of a programmatic understanding of LandCare limits its potential to contribute to broader outcomes in this space because of the project-scale with which it is currently formulating its involvement, rather than in terms of spatial areas of priority within which a coordinated set of projects are implemented. AWP represents a shift in thinking that can support a more programmatic approach to Landcare if mainstreamed and adapted vertically and horizontally.

Funding has emerged as a key cross-cutting factor that influences where and when LandCare has been implemented in the cases studied. The nature of funding per case is unreliable, conditional and spasmodic. While the programme's impact has been challenged by the above-mentioned factors, LandCare has still emerged to use its distinct flexibility to contribute to environmental and economic-agricultural outcomes. The programme generally contributed to positive environmental outcomes, noting exceptions and the role of the drought, and these outcomes have a link to mostly positive short-term agricultural-economic outputs and outcomes.

The evaluation recommends that LandCare be clarified as a programmatic intervention with spatially defined areas in which it seeks to coordinate its activities with other stakeholders. LandCare should set clear criteria for the prioritization of sites of intervention, build its capacity for social facilitation, and develop planning, monitoring and evaluation instruments to support diagnostics and intervention monitoring. LandCare should better communication and coordinate planning with provincial and regional stakeholders, informed by the optimised theory of change.

Executive summary

Background

The Western Cape Department of Agriculture (WC DoA) commissioned an *Impact, Economic and Design Evaluation of the LandCare Sub-programme* in April 2018. PDG, in collaboration with Blue North, was appointed to undertake this evaluation for the WC DoA from April to August of 2018. As the evaluation process evolved and the design adjusted, the evaluation period was extended through November 2018 to accommodate fieldwork scheduling. This document serves as the culmination of this process of evaluating the LandCare sub-programme undertaken from April-November 2018.

The purpose of the evaluation is to assess the current LandCare model's results with a view to documenting its optimal theory of change. As per the Terms of Reference, the intention is to use the evaluation to identify those aspects of LandCare's current design which do not substantively add-value and which may detract from the long-term sustainability of the programme and to improve upon it.

Brief description of the programme

LandCare has its origins in Australia, where it was initiated to develop a state-wide, holistic land protection programme facilitated with locally based community groups. The WC DoA LandCare programme has no single phrase or statement articulating its intent, the programme however adopted from Australia's experience with the programme seeks to achieve sustainable natural resource management among farmers, landowners and land users within the agricultural sector in the Western Cape. WC DoA LandCare is institutionally located within Sustainable Resource Management programme and is implemented across five districts in the Western Cape which includes a range of projects and activities inclusive of: area-wide planning; awareness raising; project implementation (e.g. alien infestation clearing, fencing installation, etc) among others.

Findings

Cross cutting findings

There are a broad variety of institutional arrangements amongst different stakeholder types that need to be taken into consideration at different levels, with different roles, and with different agendas in relation to LandCare's work in the Western Cape. The evaluation found that there are a range of stakeholders that relate to LandCare as institutional funders and donors. These stakeholders avail funds in line with their respective mandates and policy priorities but in a manner that is somewhat unreliable or sporadic for LandCare's programming. At a provincial level, LandCare as a sub-programme is clearly delineated in terms of responsibilities from Engineering Services and Disaster Risk Management. All three however are inter-dependent in terms of contributing to the objectives set out for sustainable resource management. Casidra (which serves as the department's implementing agency) has a complex and evolving interface with LandCare.

There is both a real risk, and some anecdotal historic experience, of duplication between Working for Wetlands, Working for Water and LandCare. Despite this, there are clear legal mandates and distinctions between their respective efforts which should inform the prioritisation, scale, approach and partnerships embarked upon in relation to the sites of implementation.

There is a dynamism and adaptiveness employed by LandCare across the institutional arrangements within the different cases which facilitates opportunities that contribute to the broader goals of sustainable NRM.

Comparative analysis

The table below provides a comparative analysis of outcomes across LandCare cases.

Table 1. Comparative analysis

Theme/criteria	*Rietpoort*	*Heidelberg*	*Tesselaarsdal*	*Hex*	*Koup*
Environmental outcomes	Limited environmental impact observed.	Strong, but not solely attributable to LandCare due to involvement of pre-existing Conservancy in the area.	Moderate. Aggressive erosive process addressed, but subsequent clearing and embankment grazing persist as key issues.	Significant outputs but flood mitigation and water conservation outcomes difficult to discern owing to the drought.	Considerable: improved veld management due to fencing. Overgrazing better managed through conditional drought relief, coordinated by LandCare.
Economic-agricultural outcomes	Limited. Erection of border fence presumably reduce grazing conflicts with commercial farmer. Temporary work created but inflamed inter-community conflict due to economic competition over contract work.	Strong: Job creation of local contractors and sustained clearing demand.	Highly localised. Loss of productive topsoil, water quality and flood damage risk reduced. Temporary local jobs created but hindered by poor EPWP worker retention.	Strong: trust relationship sustained post-intervention between independent contractors and landowners, linked to emphasis on follow-up clearing. Down-stream activities cultivated, and business development facilitated.	Too early to tell (fence just completed and drought), Jobs created through fencing project. Small farmers supported through communal land fencing project. Coordination of drought relief to farmers.
Social outcomes	Limited. Underlying conflicts remain.	Strong: awareness, relationship building and social capital strengthening, but may have been the same without LandCare.	Limited community strengthening, environmental awareness. Lack of post-intervention ownership by local landowners.	Considerable: network strengthening, linkages with land holders. Securing funding-backed commitment and ownership from farmers, WUAs.	Considerable: community strengthening; stewardship of environmental issues.
Unintended outcomes	Exacerbated tensions between communities owing to conflict over economic opportunity. Physical interventions without requisite buy-in may create or perpetuate passive role of citizen in terms of responsibility for sustainable resource management.	Agri-tourism benefits and conditions of Overberg water supply.	Large-scale investment in 'bricks-and-mortar' solution without requisite buy-in from local landowners may perpetuate unsustainable resource management practices. Considerable benefits to small businesses involved in contract work.	Replication of alien clearing model by WWF-SA / Wolseley WUA, funded by corporate donors. Monetisation of plant material cleared as part of alien clearing alleged to result in selective clearing of more woody sections. However, this point remains contested and undetermined.	Ongoing research collaboration with academic institutions. Potential for securing international donor funding.

Synthesis of findings

The following section seeks to synthesise the findings arising from the five case studies, cross-cutting findings and comparative analysis.

How did the programme change people's and community perceptions about caring for the environment?

The evaluation has sought to understand change in people's and community perceptions about caring for the environment. In the five cases of this evaluation, it emerged that LandCare has contributed to community perceptions about caring for the environment to varying degrees. Where there is a strong stakeholder network focus in place, community perceptions about caring for the environment appear most positive. Inversely, where LandCare's implicit social facilitation role was not embraced (e.g. Rietpoort and Tesselaarsdaal), evidence of changes in community perceptions about caring for the environment appear slim to none. Whether or not LandCare significantly changed the pre-existing community perceptions could not be conclusively determined across cases. It was nevertheless clear that LandCare has made a contribution to reinforcing the observed positive community perceptions in terms of caring for the environment, and this is a notable contribution in its own right.

There is also some evidence from the case studies that Junior LandCare has served an awareness raising function, although not necessarily among the same communities which are immediately affected by LandCare's intervention and the technical services it has provided. There is nevertheless a disconnect between the participants of Junior LandCare (e.g. adolescent learners) as a target group and the stakeholders whose more immediate behavioural change (e.g. farmers and staff) is sought in relation to the agricultural-environmental issues to which LandCare responds. LandCare's ability to influence community perceptions about caring for the environment ultimately rests on it being more deliberate and strategic about whose perceptions it seeks to change, why it wants to change them and how it chooses to do so.

What are the socio-economic and environmental benefits of the work done through LandCare when taking climate change strategies and other national and international agreements into account?

The socio-economic and environmental benefits of the work done through LandCare are variable across cases and contextually informed. In none of the cases included within this evaluation can the full suite of outcomes assessed be attributed exclusively to the role or intervention of LandCare as they have all occurred in contexts where a range of actors, both internal to the WC DoA and external to it, have been or are currently involved, sharing similar aims and objectives and with a stake in the results. LandCare's contribution to the socio-economic and environmental outcomes has ranged from the more considerable to the marginal.

What does distinguish LandCare is its adaptive management approach and ability to pivot between different stakeholders, activities, services and initiatives. LandCare implements initiatives which fall within the broad parameters of the priority areas set-out in the SmartAgri-Plan. However, the extent to which considerations of climate change strategies and agreements actually inform its selection of sites and projects for implementation appears limited outside of reactive cases linked to DRM funding.

In addition, the evaluation found that the classification of AWP as a type of "project" reflects a lack of a programmatic understanding about how LandCare could apply this as an embedded approach. In the absence of LandCare having a programmatic process for determining which projects it pursues where, it then becomes extremely difficult to draw a relationship between the desired outcomes of the broader policies with the strategies employed for the actual project implementation on the ground.

Is the LandCare methodology of implementing projects in partnership of community based natural resource management effective when compared with other similar programmes?

LandCare's methodology and adaptive management approach is distinct and agile in relation to other programmes. LandCare can adapt and respond across environments and challenges. LandCare is able to work across these other initiatives and link them into stewardship networks around which they can coordinate and derive efficiencies too. LandCare can do many different things with its technical expertise, at different times and in different sequences to facilitate behavioural change and support achievement of the overall results it prioritises within an area.

Another area of LandCare's approach that is both an advantage and a risk for the programme is how it operates to secure funding. Whereas similar programmes tend to have more substantial and regular funding streams, LandCare leverages opportunity from various funding streams and works across them, linking, filling gaps and connecting to do more with scarce resources.

One of the shortcomings identified in this evaluation is that the potential of this methodology is not yet adequately realised by the WC DoA because of the ad-hoc and reactive manner in which some projects have been undertaken.

Conclusions and Recommendations

The evaluation concludes that the LandCare model is unique among related programmes as it employs an adaptive management approach and operates with an intentional agility. LandCare's adaptive approach lends itself to contextually informed responses to agricultural-environmental issues in partnership with a diverse range of external actors, consistent with the WCG's "whole-of-society-approach". However, despite LandCare's unique model, WC DoA LandCare has not been clear or coherent in approaching areas of intervention systematically in terms of the inter-related social, agricultural-economic and environmental outcomes it seeks to achieve. The lack of a programmatic approach has been most apparent in terms of achieving social outcomes. In addition, the lack of a programmatic understanding of LandCare limits its potential to contribute to broader outcomes in this space particularly in relation to contributing to mitigation and environmental resilience.

Funding has emerged as a key cross-cutting factor that influences where and when LandCare has been implemented in the cases studied. The nature of funding is unreliable, conditional and spasmodic. Despite these challenges, the programme generally contributed to positive environmental outcomes.

Based on the findings and conclusions, the following recommendations were developed and can be summarised as follows:

Design recommendations

1. **LandCare should be clarified as a programmatic intervention[1] with spatially defined areas in which it seeks to coordinate its activities with those of other stakeholders**.
    - This will support both responsive and proactive interventions in which identified agricultural-environmental issues and risks can be addressed in a coordinated manner in relation to contextually informed and differentiated objectives.

[1] Reference should be made to the Department of Planning, Monitoring & Evaluation's *Guideline 2.2.3- Guideline for the planning of new implementation programmes.*

- WC DoA should systematically set out which types of agricultural-environmental issues it will prioritise addressing and why, and specify the kind of results it seeks to achieve in different contexts.

2. **WC DoA should define the criteria for prioritising the spaces in which LandCare seeks to drive sustainable natural resource management within an adaptive management approach.**
    - Criteria for prioritisation and definition of the spaces in which LandCare seeks to achieve outcomes should be set.
    - Importantly, these criteria can be explicitly informed by climate change strategy, national and provincial policy priorities and should inform funding allocations. In this way, prioritised spaces can inform the coordination of projects, where a mainstreamed AWP approach is compatible.
3. **WC DoA LandCare should build its capacity for social facilitation to expand environmental stewardship networks across socio-economic contexts.**
    - LandCare can be more systematic about the bridging component of its work by embarking on basic diagnostics of the social contexts in the spaces it prioritises by building upon the capacity it has and enhancing its capabilities to undertake social facilitation.
4. **WC DoA LandCare should develop a results-based planning, monitoring & evaluation toolkit that is differentiated based on the nature of the LandCare case, service provision and stage of implementation**.
    - The use of more structured planning, monitoring and reporting instruments from the outset will assist with diagnostics that align to better implementation monitoring and reporting to contextually specified outcomes.

LandCare implementation recommendation

5. **WC DoA LandCare needs to set out the steps and platforms it uses for appropriate communication and coordination of planning and implementation with other institutional actors to avoid duplication of efforts.**
    - Lateral planning, coordination and prioritisation needs to occur from province down to site-level in a transparent and mutually understood manner. AWP thinking should effectively filter up and be mainstreamed.
6. **Lastly, the following Theory of Change should be considered as a more optimal reflection of LandCare's programme theory going forward.**
    - The main changes to the Theory of Change reflect in the addition of a range of assumptions at key junctures of the process which need to be met in order for intervention logic to hold. See *Figure 4: Optimised Theory of Change for WC DoA LandCare* at the end of the summary report.

25 Page Summary Report

1 Introduction

The Western Cape Department of Agriculture (WC DoA) commissioned an *Impact, Economic and Design Evaluation of the LandCare Sub-programme* in April 2018. PDG, in collaboration with Blue North, was appointed to undertake this evaluation for the WC DoA from April to August of 2018. As the evaluation process evolved and the design adjusted, the evaluation period was extended through November 2018 to accommodate fieldwork scheduling. This document serves as the culmination of this process of evaluating the LandCare sub-programme undertaken from April-November 2018.

1.1 Purpose of the evaluation

The purpose of the evaluation is to assess the current LandCare model's results with a view to documenting its optimal theory of change. As per the Terms of Reference, the intention is to use the evaluation to identify those aspects of LandCare's current design which do not substantively add-value and which may detract from the long-term sustainability of the programme and to improve upon it.

2 Background to Western Cape LandCare

2.1 LandCare in an international context

LandCare has its origins in Australia, where it was initiated to develop a state-wide, holistic land protection programme facilitated with locally based community groups. The Australian National LandCare Programme (NLP), launched in 1989, has since been heralded as a world leading example of community based natural resource management (Tennent & Lockie, 2015). In 2008, the NLP programme was absorbed into a new government programme called "Caring for our Country". This change represented a shift in approach in natural resource management, with policy prioritising measurable outcomes and a market-based delivery mechanism which conceptualised environmental degradation as a form of market failure.

Essentially, LandCare is a specific model, or approach, to community-based natural resource management (NRM), where collaborative environmental planning, co-management and community-based planning are a 'bottom-up' alternative to conventional 'top-down' approaches (Prager & Vanclay, 2010). Central to the approach is the importance of assistance for coordination and cooperation as this is required at a variety of scales to encompass and manage cross border dynamics of land degradation (Tennent & Lockie, 2015).

2.2 LandCare in the Western Cape

LandCare draws and is guided by the following national and provincial legislation:

- The South African Constitution (1996)
- Conservation of Agricultural Resources Act (CARA) (No. 43 of 1983)
- National Environmental Management Act (NEMA) No. 107 of 1998
- National Water Act (NWA) No. 36 of 1998
- National Environmental Management: Biodiversity Act (NEM:BA) No. 10 of 2004

The programme further contributes to policy objectives from the National Development Plan (National Planning Commission, 2011) and the National Outcomes

in the Medium-Term Strategic Framework (MTSF 2014-2019) which express the need to address development challenges in a way that ensures sustainability and builds resilience. LandCare also supports provincial strategic goals 1 and 4 and seeks to employ an approach consistent with the "whole-of-society approach" advocated in the Provincial Strategic Plan.

2.3 Western Cape LandCare as an intervention

The WC DoA LandCare programme has no single phrase or statement articulating its intent. A synthesis of its stated aims would be the following to achieve sustainable natural resource management among farmers, landowners and land users within the agricultural sector in the Western Cape. The programme's stated aims are broadly consistent with the international and national intentions associated with LandCare more commonly. Where WC DoA LandCare is distinct is in how it seeks to structure and organise itself in relation to the achievement of these aims.

WC DoA LandCare is institutionally located within Sustainable Resource Management programme of the WC DoA. The programme is structured into four sub-programmes:

1) Engineering Services
2) LandCare[2]
3) Land Use Management
4) Disaster Risk Management

LandCare is implemented across five districts in the Western Cape and includes a range of projects and activities inclusive of: area-wide planning; awareness raising; project implementation (e.g. alien infestation clearing, fencing installation, etc) among others. This reflects in the activities that follow in the draft Theory of Change used for the purpose of the evaluation.

Another important arrangement to note is that of the role of Casidra, which has come to function as the Western Cape government's implementing agency in relation to LandCare projects. Casidra provides sustainable resource management solutions through proactive communication, facilitation and implementing various LandCare projects (Casidra, 2014).

2.4 A draft Theory of Change and analytical framework

Given the diversity of the activities conducted under LandCare and its contextual emphasis, **Error! Reference source not found.** was agreed as a working "core" intervention theory to apply across LandCare cases for the purpose of the evaluation.

The ToC follows a classic results-chain approach, mapped from left to right. However, unique to LandCare, it operates across three overlapping spheres. The spheres are as follows:

- Social: Focusing on human stakeholders and their relationships;
- Economic-agricultural: Addressing mainly agricultural productivity and economic activities; and
- Environment: Addressing the natural environment in general.

These spheres are not considered mutually exclusive and are in practice inter-connected, integrated and reinforcing in line with NRM systems literature.

[2] LandCare is at times referred to as a "sub-programme" because, as shown here, it is technically sub-programme 2.2 under Programme 2: Sustainable Resource Management in the Department's budget programme structure. However, since it is focus of this evaluation, it is referred to in this document simply as a "programme" because it is akin to an implementation programme, as per DPME's guideline 2.2.3.

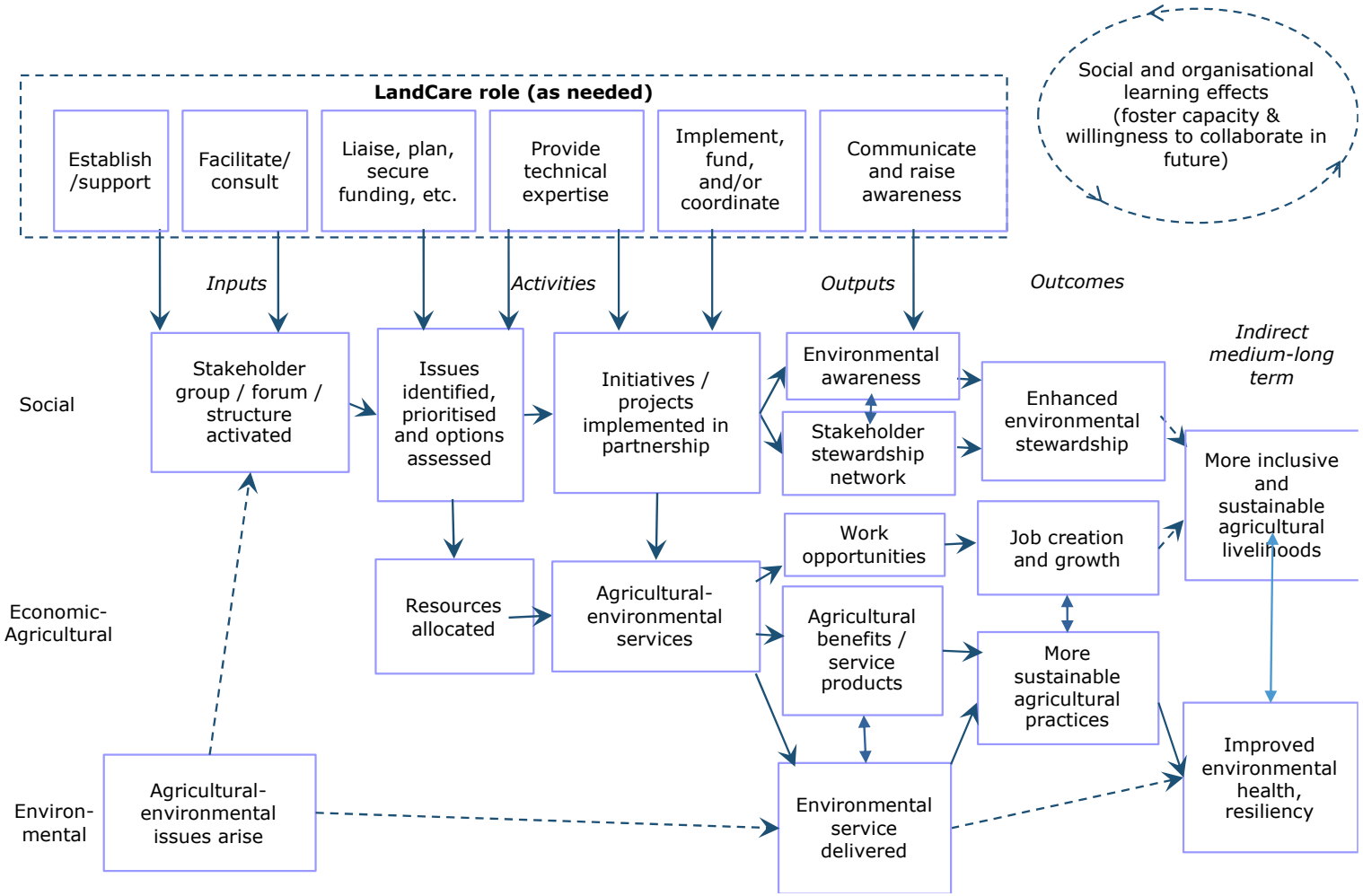

Figure 1: Draft Theory of Change for LandCare's intervention

3 Methodology

The ToR originally proposed this as an impact, economic and design evaluation that sought to document the optimal Theory of Change for the LandCare model. The evaluation team responded by proposing a contribution analysis to rigorously test the outcomes and impacts arising from the intervention, applying a form of theory-based evaluation in select cases. However, at the review phase of the evaluation it became apparent that a rigorous contribution analysis would not be possible owing to programme design ambiguities that made the identification of LandCare "cases" itself a significant data collection exercise. The contextually informed and adaptive nature of the LandCare model was not documented in a coherent programme design that could meaningfully inform the selection of intervention cases for the purpose of a theory-based evaluation. The evaluation team thus embarked on an extended process of primary data collection to describe and enumerate LandCare cases. A working-draft Theory of Change was developed as a basis for framing an assessment of the LandCare intervention.

3.1 Case numeration and selection

In the absence of a common conceptualisation of a LandCare "case" within the sub-programme, the evaluation team in consultation with LandCare staff, applied the conceptual and definitional lessons from the international literature. Cases were therefore defined in terms of space: 1) in terms of the administrative municipal districts within the LandCare management staff operated and 2) in terms of the geographic area/locality in which LandCare activities were undertaken.

A list of 37 cases were identified arising from the interviews with the District Managers. The following criteria were employed to arrive at the selection of one case per District, or five cases in total:

- Variety of Districts (1 per District)
- Mix and comparability of project types within a case (e.g. alien clearing, river protection, fencing, junior LandCare, etc)
- Variation in size between Medium and Large cases
- At least two years old or more (necessary to realise outcomes)

Table 2: LandCare case studies selected

District	Local Municipality	Geographic locality	Point of entry	Associated projects	Esti-mated size	More than 2 years?
Eden	Hessequa	Heidelberg	Farmers' unions; Disaster Risk Management; Grootvadersbosch Conservancy; SRMC to a lesser extent	River protection works; Alien clearing	Large	Yes
Central Karoo	Laingsburg	The KOUP (Laingsburg and surrounds)	SRMC	Mapping & Fencing; Herbicide (cactus and invasive tree); Awareness	Large	Completed
West Coast	Matzikama	Rietpoort	3 local associations (Stofkraal Stofkraal , Molsvlei & Rietpoort)	Farm planning; fencing	Large	Yes
Cape Winelands	Breede Valley	Hex river towards De Doorns	Hex River Water Users Association and Worcester-Oos Irrigation board	MMP; Alien clearing	Medium	Few years old
Overberg	Theewaters-kloof	Tesselaarsdal	Tesselaarsdal River Action Group	River protection works; Alien clearing; Junior LandCare	Medium	Yes

Note the criteria did not include a consideration of how representative the case is of LandCare's work in the district. Given the uniqueness of the cases in each district, it would be inappropriate to take LandCare's perceived "success" or "failure" in each case as reflective of the performance of LandCare in the district. Similarly, it would be inappropriate to extrapolate the frequency of positive outcomes in these five cases, to estimate the frequency of positive outcomes in the programme as a whole.

3.1.1 Case study data collection and assessment

Across the five case studies, 58 different individuals were involved in data collection across 33 interviews and five focus groups. While each of these engagements employed a somewhat customised interview instrument given the variable contexts, they were conducted within the frame of the overarching assessment framework for the evaluation.

3.1.2 Overarching assessment

As part of the overarching assessment, interviews were undertaken with key stakeholders from different institutions that have a direct knowledge and relationship with the LandCare programme, and/or similar programmes which operate in the same spaces and deliver similar services. These interviews specifically sought to solicit cross-cutting insights about the LandCare programme and its relationship to other programmes.

Table 3. Cross-cutting stakeholder interviews

Interviews	Number of respondents
WC DoA: Engineering services	2 (2 interviews)
Working for Wetlands (DEA)	1 (1 interview)
WC DoA: Disaster Risk Management	1 (1 interview)
CASIDRA	1 (1 interview)
Working for Water (DEA)	2 (1 interview)
Total	**7 (6 interviews)**

3.2 Limitations of the methodology

The methods employed for the evaluation were not without their limitations and these should be acknowledged when considering the findings, along with the efforts taken to mitigate these limitations insofar as possible.

The evaluation design and methodology was adapted at both the inception and review phase, in consultation and agreement with WC DoA, with acknowledgement that this would both limit the depth of analysis in specific cases and expand the scope so as to provide wider coverage of experience across all five districts. One of the first limitations in this regard was with regards to the availability of data required to undertake some of the originally proposed analysis. Specifically, this refers to diagnostic, economic and outcome level data in the respective sites of implementation. This extends more broadly to the availability of programme design documentation and clarity with regards to the prioritisation and selection of sites and cases for intervention.

The shift to the case study design brought limitations because the evaluation sought to answer generalisable questions about the impact of the programme in the province. This does not allow the evaluators to make any generalisable findings with regards to the outcomes LandCare has achieved province-wide, but instead locates them within the scope of the five case studies under assessment.

The approach to sampling within each of the case studies required a snowball approach. While efforts were made to obtain different perspectives from the community, each case relied on the network and referral of the District Managers in each instance. This means that any pre-existing biases within these networks had a

bearing on who was engaged for the interviews and focus groups. Conscious efforts were however made to cover a variety of perspectives in each case.

Lastly, there were limitations of both time and resources for the project. Nevertheless, the evaluation did go beyond the agreed number of case studies because of the compelling motivation to cover a case from every district and did exhaust representation from the sought-after stakeholder groups for each case. As a result, the evaluation, while noting its limitations, provides a credible and well-substantiated assessment of LandCare in five cases in the Western Cape.

4 Cross-cutting findings

This section sets out the cross-cutting and overarching findings arising from data collection and analysis.

4.1 Institutional arrangements

LandCare operates in a complex institutional environment comprised of state and non-state actors each with potentially competing and/or complementary interests and agendas.

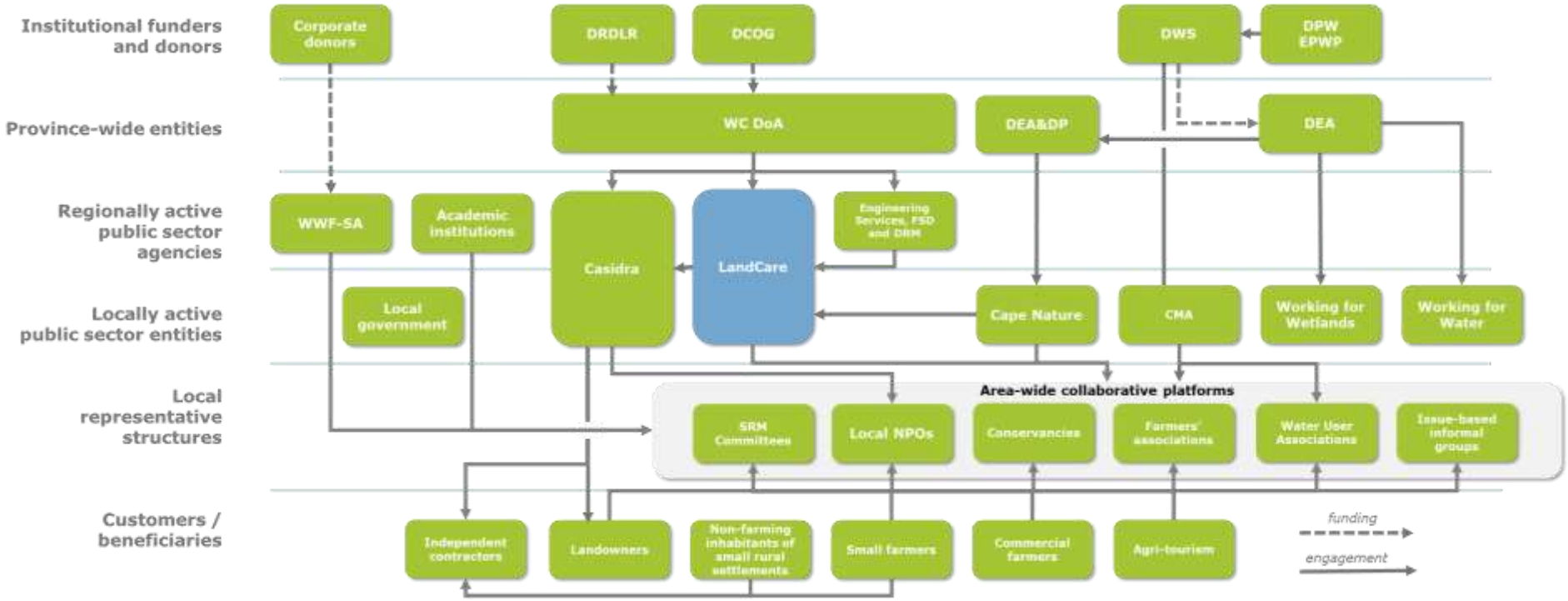

Figure 2. Institutional arrangements for LandCare

LandCare's institutional relationships

LandCare operates parallel to a number of various interventions by other departments and organisations doing similar work. Figure 2 sets out at the institutional arrangements between LandCare and other various organisations. The findings related to these institutional relationships in more detail below.

Funder/donors

The availability of funding has an important influence on the role LandCare has chosen to play in the respective case studies and the activities it has undertaken. A rage of funders/donors avail funds in line with their respective mandates and policy priorities but in a manner that is somewhat unreliable or sporadic for LandCare's programming. This has led LandCare to develop something akin to an entrepreneurial approach as to where and how it implements activities with due regard to the various national and provincial departments providing funding (directly or indirectly) and undertaking work in these areas. This is inclusive of the Department of Rural Development and Land Reform (DRDLR), the Department of Public Works (DPW)- Expanded Public Works Programme (EPWP), the Department of Cooperative Governance (DCoG)- Disaster Risk Management (DRM), and the Department of Water & Sanitation (DWS) in conjunction with the Department of Environmental Affairs (DEA) (particularly for the "Working for's"), as reflected in the figure.

Across the case studies, the funding from WC DoA Disaster Risk Management (DRM) was most substantial among sources within the department, although there were also equitable share and EPWP funds allocated to the LandCare programme in relation to alien invasive clearing, fencing, junior LandCare and others.

In interviews with external stakeholders it was acknowledged that among LandCare's District Managers there is an awareness of contextual conditions and their presence "on the ground" was well-regarded by the different institutional stakeholders interviewed within the scope of the evaluation.

Province-wide actors and regionally active public sector agencies

At the provincial level, the **WC DoA** is the actor primarily responsible for achieving sustainable natural resource management. Central to LandCare's intervention and project selection in the five cases has been that of **Engineering Services** and **Disaster Risk Management**. There is a clear delineation of responsibilities between DRM, LandCare and Engineering Services. All three are inter-dependent in terms of contributing to the objectives set out for sustainable resource management.

Farmer Support and Development is a separate budget programme but also interfaces with LandCare's work through extension officers who collaborate with LandCare, particularly in relation to small holder farmers.

Casidra

Casidra serves as the department's implementing agency. Casidra is responsible for the procurement and funding administration functions specifically, for construction projects in particular. Prior to 2013, LandCare assumed the responsibility that Casidra currently plays. WC DoA LandCare currently identifies projects to be implemented by Casidra. The nature of the role and interface between Casidra and LandCare is complex and has evolved over recent years as part of LandCare's adaptive approach. However, as the evaluation focuses on assessing results and programme design, the modalities of implementation and detail of the nature of this working relationship was not assessed in further depth.

Department of Environmental Affairs (DEA)

Through its regional offices, the DEA operates province-wide and in close proximity to LandCare.

Working for Wetlands

Working for Wetlands operates in the same space and pursues similar objectives to that of LandCare in terms of the rehabilitation and protection of wetlands. The two programmes are distinguished in terms of their focus and legislative mandates (e.g. CARA primarily for LandCare and NEMA for Working for Wetlands) and project implementation approach. Working for Wetlands adopts a labour-intensive approach to wetland rehabilitation projects by using unskilled labour wherever possible at scale. It emerged that there are no clear rules of engagement between the two programmes. Planning and coordination therefore occur on a more ad-hoc basis, rather than through a systematic prioritisation and coordination of the related initiatives and their efforts.

Working for Water

Working for Water and LandCare have a similar client base but have different objectives in relation to the management and control of alien species. Key distinctions between the two programmes include funding (Working for Water is funded by EPWP) while LandCare tends to fund initial clearing and focus on co-funding agreements with landowners for follow-up clearing. Secondly, Working for Water provides bigger and longer-term services whereas LandCare provides an intervention that can sustained on a smaller scale through initial funding and implementation, before relying on local stakeholders and co-funding.

Working for Water maintains a planning and coordination forum in which the WC DoA: LandCare is represented in an effort to avoid duplication of efforts in the same spaces. However, while this coordination and sharing does occur to a certain extent it does not occur systematically and equally across levels and planning cycles.

Department of Environmental Affairs and Development Planning

DEADP plays a regulatory role with particular reference to NEMA. It is mainly responsible for the approval of EIAs and granting authorisations for construction work. Given the size and practical realities of DEADP, it has emerged to not have full insight and knowledge of what occurs in relation to compliance since it cannot be present across all environments it needs to regulate. LandCare, and specifically the District Managers, therefore fulfil a function of providing information from remote sites and support referrals and identification of the need for regulatory approvals and transgressions.

Other actors

Other actors such as academic institutions and the World Wildlife Fund SA are also active at a regional level. These actors tend to interface with LandCare on a case by case basis either through networks or direct appeals of individuals associated with WC DoA and LandCare.

Local public sector entities

Local government

For local and district municipalities, there is an emerging finding here that these entities have played a limited role in the collaborative forums of LandCare's interventions to date even as they provide the administrative frame around which district managers work and serve as the lowest platform for elected representatives and governance.

Cape Nature

Cape Nature's stewardship with LandCare has been able to work closely towards shared goals by partnering in activities addressing invasive alien species land clearing, illegal ploughing and as well as farmer awareness days. Interface tends to occur at a local level and in relation to LandCare sites that are adjoining environments of Cape Nature.

Catchment Management Agencies (CMAs)

The link between LandCare and CMAs is the water central to the agricultural sector. CMAs' statutory control over water licensing provides the channel through which advising and monitoring of water use occurs. LandCare works with CMAs via local collaborative forums to ensure coordination for water management, particularly related to water security and quality.

Local representative structures

LandCare has worked with various organised structures throughout the districts in the Western Cape that generally function to represent farmers, landowners and other stakeholder interests. These structures include conservancies, informal inter-departmental networks, farmers' unions and others. These structures may represent localised environmental stewardship networks, be specialised in their focus and display varying levels of capacity and effectiveness in terms of representation, consultation, information sharing and awareness. A key finding is that these structures are often entry points for LandCare's intervention in the spaces in which they operate. The structures are central to the sustainability of their work, particularly in the absence of more consistent streams of funding.

Sustainable Resource Management Committees

LandCare's experience with SRM Committees varies across the case studies. An emerging finding is that in cases where SRM Committees are active and farmers and other organised structures are represented on these committees, they appear to follow their mandate to promote and present solutions to conservation related matters as per the committee's mandate. However, it is unclear the effectiveness of the committees' role in advising the WC DoA, particularly as it relates to the prioritisation and identification of areas for potential identification owing to limited LandCare documentation in this regard.

Customers / beneficiaries

The customers of LandCare's services include farmers and landowners. The evaluation further revealed additional beneficiaries including workers employed by contractors, communities and unintended non-farming beneficiaries such as local small businesses, water boards and agri-tourism organisations to name a few. The nature of the benefits are spread across the social, agricultural-economic and environmental spheres, as per the later comparative analysis.

4.2 Synthesising remarks

There are a broad variety of institutional arrangements amongst different stakeholder types that need to be taken into consideration at different levels, with different roles, and with different agendas in relation to LandCare's work in the Western Cape. Many programmes and institutions share similar goals to LandCare, the "Working for's" in particular. It is imperative that if all of these institutional actors with similar mandates and interests are to contribute to common goals and work in close proximity to each other, that their respective roles and responsibilities should be mutually understood, particularly in the specific areas and contexts of LandCare's collaborative work.

LandCare makes effective use of its legal mandate in CARA when identifying how to link the NRM related issues it encounters on the ground to funding priorities of national and provincial government which it can leverage. It plays an important bridging role in this regard, as it makes linkages which provide avenues to secure funding. This is a role and function unique among the institutional actors identified in the course of the evaluation.

There is both a real risk, and some anecdotal historic experience, of duplication between Working for Wetlands, Working for Water and LandCare. Despite this, there are clear legal mandates and distinctions between their respective efforts which should inform the prioritisation, scale, approach and partnerships embarked upon in

relation to the sites of implementation. Coordination and cooperation between other organisations and LandCare is crucial to the kind of approach employed by the WC DoA, and this is required at various scales to encompass and manage the cross-border dynamics of land degradation (Tennent & Lockie, 2015). LandCare, and the District Managers in particular, possess unique insights into the agricultural sector which enable them to engage with farmers and landowners in a distinctly different way to other actors, in a manner consistent with the provincial government's "Whole-of-society-approach". Thus, LandCare's efforts do not occur at a wide a scale as the "Working for's" or in as long of duration, but they occur at a depth of engagement and in relation to role-players and areas which speak to agricultural-economic priorities and concerns first and foremost.

LandCare's bridging efforts and willingness to work laterally also means that it can link into and work closely with organisations that share common objectives. At a local level, pre-existing conservancy groups (e.g. GVB conservancy in the Heidelberg case) and community structures (e.g. Tesselaarsdaal Action Group) represent existing institutional actors emblematic of stewardship networks that LandCare can partner with, leverage and build upon. The LandCare relationship need not be formalised, but it is clear that when they co-operate and collaborate there is the potential for mutual benefit and this is largely apparent across cases. Again, LandCare's role in this regard appears distinct among the various role-players present in the cases. Linking into such networks and opportunities, and building them where they do not exist, then becomes a means of facilitating broader stakeholder engagements and expanding those networks (e.g with academic institutions, corporates, etc). Thus, there is a dynamism and adaptiveness employed by LandCare across the institutional arrangements within the different cases which facilitates opportunities that contribute to the broader goals of sustainable NRM.

5 Comparative analysis

The cross-study comparative analysis allows for the identification of general, cross-cutting observations drawn from specific isolated but meaningful case experiences. These case studies are analysed in terms of the Theory of Change and relevant literature.

5.1 Identification of environmental issues and entry networks

Table 4: Comparison of issues, entry points and LandCare's role

Theme/criteria	*Rietpoort*	*Heidelberg*	*Tesselaarsdal*	*Hex*	*Koup*
Type of problem (as identified by LandCare):	1. Economic-agricultural 2. Environmental 3. Social	1. Environmental 2. Economic-agricultural	1. Environmental 2.Economic-agricultural	1. Environmental 2. Economic-agricultural	1.Economic-agricultural 2. Social 3. Environmental
Nature of intervention as proposed by LandCare (social; economic-agricultural; environmental)	1. Economic-agricultural (fencing, farm plans) 2.Environmental (protection of veld) Not explicit: Social (relationship between commercial farmer and community and between the three communities)	1.Environmental (invasive aliens, erosion control) 2. Economic-agricultural (loss of productive land) 3. Social: Junior LandCare	1.Environmental (erosion, invasive aliens) 2.Economic-agricultural (loss of productive land)	1. Social (convening, training and Junior LandCare) 2. Environmental (alien land clearing, erosion control) 3. Economic-agricultural (repair of flood damage, loss of productive land and job creation)	1.Economic-agricultural (fencing and job creation) 2. Social (training and local forum)
Landcare Role in Case	1. Secure funding 2. Liaise with community 3. Technical expertise 4. Implementation 5. Re-establishing local structures	1. Secure part of funding 2. Technical expertise 3. Coordination 4. Awareness raising	1. Facilitation 2. Funding (limited)	1. Facilitation 2. Funding 3. Awareness raising 4.Technical expertise 5. Coordination	1. Facilitation 2. Funding 3.Technical expertise 4. Awareness raising 5.Liaise with community

Identification of environmental issues[3]

LandCare's AWP approach envisioned communities identifying common issues themselves as part of the idea of locally-driven initiatives. LandCare's role in this regard would involve facilitating and supporting the process of identifying the issue and activating partnerships to address the issue(s).

In most of the cases under assessment, however, the activation of LandCare's involvement in high visibility and funded projects has followed an environmental disaster, event or conflict, as these unlock DRM or similar funding. However, this is not to diminish the less visible impact of routine and ad hoc technical planning and networking activity in proactively addressing risks associated with natural resource management.

These low-visibility activities however are more difficult to evaluate as their impacts and stakeholder footprint are more diffuse compared to projects such as protection works and rehabilitation interventions that LandCare has engaged with. These interventions in the context of the analysed case studies have been a direct response to the occurrence of a flood which had caused significant damage to infrastructure and agricultural land. This, as indicated earlier in the discussion around institutional arrangements, has made it imperative for the coordination of LandCare with other sub-programmes (in this case DRM) within the sustainable resource management budget programme.

Technical characterisation of problems and interventions

The underlying *technical* problem type is very similar across all case studies: namely damage or vulnerability of those localised natural resources which directly sustain agricultural operations and thus rural livelihoods. *Technically,* the next stage of problem specification is determined by the extent to which the particular resources (i.e. top soil, water courses) have sustained damaged or are at risk in respective case studies. These in turn are shaped by local and regional ecological factors and particular weather events such as drought or floods. The intensity of the damage or risk identified is mediated by prevailing farming practices. The easily observable parameters of these practices, such as farm size and grazing densities, are rarely determined by purely technical considerations of soil capability and water availability. Instead, these are heavily influenced by each respective area's historical, socio-political context: for example, the impact of unsustainable, small land units on overgrazing in Tesselaarsdal, or the impact of communal ownership of low capability land in Rietpoort on economically-rooted localised social conflict.

Similarly, supra-local events, trends and (removal of) market distortions have a differentiated impact across case studies: for example, the impact of the removal of agricultural subsidies on veld management disproportionately affect economically marginal sheep farming in the Karoo. Seen conversely, it may also be fair to argue that the earlier provision of subsidies to farmers on marginal land had historically created an artificial and unsustainable rural economy.

Locally and institutionally contingent interpretations of the problem(s) and intervention(s)

However, the characterisation of LandCare problem identification and interventions in terms of the Theory of Change in each case cannot be understood purely on technical grounds, but instead is better understood as a product of the process itself and the institutional context in which that process evolves: across all cases, the LandCare intervention was precipitated in response to a problem identified by local

[3] Note that the cases referred to here are written up in detail in the full evaluation report and these should be consulted when seeking points of clarity and elaboration in terms of the comparative analysis.

stakeholders, typically landowners or locally organised representative structures. Problems were thus initially characterised by and in terms of economic-agricultural interests. However, problems were also described or re-positioned as environmental where it was fortuitous to do so given the stated interests of important local stakeholders or the mandate of potential funders. For example, in Tesselaarsdal the precipitating event was the accelerated erosion of the gulley. This may be fairly interpreted as this issue was reported by local landowners as threatening the economic livelihood of farmers through the loss of productive land and deterioration of water quality. However, by foregrounding the vulnerability of the wetland further upstream, it was possible to source in funding from EPWP / DEA via the Working for Wetlands programme. Similarly, in Hex River Valley and Upper Breede Valley, alien clearing is characterised as an environmental issue where appropriate (e.g. CapeNature, EPWP, CMA etc.), whereas the same issue is characterised as agricultural-economic when engaging with WUA, farmers' unions. In summary, a cross-study observation is that, in identifying and prioritising issues in the realm of sustainable resource management, the distinction between environmental and agricultural-economic is fungible and contingent on the interest of stakeholders who need to be mobilised, including funding partners. What is rarer, however, is the explicit characterisation of the issue as primarily social. There were, however, instances where this occurred, primarily in aid of meeting the funding conditions of national funds. In the case of Laingsburg, this has had the positive impact of precipitating a repositioning of the programme focus, thus having the (implicit) effect of inducing alignment between local intervention and national developmental priorities.

LandCare's distinct approach

LandCare's focus is on "building resilient and sustainable communities to act to enhance and maintain the natural assets in their landscape…" which again is intended to set it apart from other programmes. One way in which this approach has manifested is in LandCare's attempt to secure buy in and ownership from landowners to sustain the continuity and protect the investment of its interventions. In some cases, LandCare has been deliberate in securing this ownership from the outset, in these cases where it has been fairly successful it has largely been the result of two key factors: 1) a co-funding arrangement to secure landowners' commitment as mentioned above and 2) an agreement in writing (mainly in the form of an MOA) where the landowner commits to honouring a commitment (e.g. maintaining alien clearing). This experience however has not been uniform across all case studies. In other cases, the ownership was implicit and emerged to have been less successful.

The centrality of LandCare champions in defining LandCare's role

LandCare's role in each case however was determined not only by the process or the institutional context, but by the extent to which it was able to respond to the exigencies presented by the technical problem. This extent, in turn, was determined less by the adequacy of operational funding or supporting staff available to the LandCare official (which is almost invariably inadequate according to officials) but instead by the technical competence, social aptitude (see below) and versatility of the district manager. It is the district manager who – based on a rapid assessment of the technical problem and the social context (often intuitive and implicit) within which the technical problem is embedded - decides on the appropriate role of LandCare. Whereas the technical problems identified may be systematised to some degree, the social contexts in which they are embedded are invariably novel and idiosyncratic[4]. In order to navigate these social contexts effectively, a degree of social aptitude is required. However, this is not sufficient in and of itself, as LandCare's

[4] Refers to peculiar and characteristically defined social contexts.

approach requires it intersect with and overlap with technical competence and versatility.

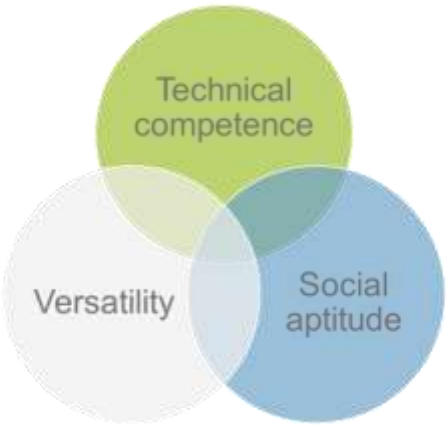

Figure 3: A LandCare Champion's ideal characteristics

Social aptitude in this sense, encompasses the personal abilities underlying social competence, especially the capacity to encode and interpret social cues to draw inferences about other's beliefs and intentions. However, social aptitude is distinct from a more generic concept of 'social competence', in that it includes the ability to establish inter-personal trust on the basis of socio-cultural affinity. Affinity[5] is facilitated by, but not limited to, shared socio-cultural norms and language. Social aptitude is thus a critical requirement for securing commitment and behaviour change from individuals and groups outside of one's existing social network.

This finding is reinforced by international literature on LandCare, where Folke et al. (Folke, Hahn, Olsson & Norberg, 2005) explored adaptive governance of socio-ecological systems and highlight the importance of key individuals for leadership, trust and vision. Social aptitude is central to securing and maintaining trust.

LandCare as entrepreneur: sourcing funding

This facilitation role may generate, over time, a foundation of trust and legitimacy amongst local stakeholders which provides the grounds for securing financial commitment from local landowners. The most salient example of this is the commitment by landowners in the Hex River Valley to co-fund alien clearing and take responsibility for funding follow-up clearing. Where the nature of a problem avails itself to potential funding, a district manager duly equipped with versatility and self-initiative may motivate for and secure funding. LandCare's unique mandate and approach encompassing the agricultural-economic, environmental, and social dimensions of sustainable resource management is almost uniquely positioned to secure or leverage funding from a broad range of potential funders. This entrepreneurial approach to funding options is a critically important adaptive strategy in sustaining initiatives amid spasmodic and unreliable funding within a shifting policy landscape.

LandCare as bridge-builder: coalescing interests

A risk with socially-oriented interventions in the public sector is that, whether linking into existing structures or preferring instead to establish structures where officials have the balance of control over the process, this is done to the exclusion or disadvantage of some groups, whether real or perceived. Rietpoort is a case in point, in part because there was not a representative community structure in place and establishing one may well be beyond the pale of even the most seasoned social

[5] Affinity refers to the liking or understanding of someone or something.

facilitator, as instrumental as that might be to more sustainable natural resource management.

This can be contrasted where a well-organised and active existing structure was in place at the inception phase, the emphasis shifted towards coordination between existing partners, or crowding-in additional local or supra-local partners for funding (e.g. Heidelberg) or information-sharing (e.g. Hex River Valley). In the Upper Breede, the LandCare official played an invaluable leadership role by coalescing existing strategic partners around a new agenda, such as re-aligning regulatory-, advocacy- and facilitation-oriented public sector entities within a spatially defined area, from a biodiversity agenda towards a water-centric agenda.

In Laingsburg, a LandCare Forum was established which included a broad array of locally active, notionally representative bodies and local government. Critically, the forum is not only limited to connecting local structures, but also connecting the overall platform to domestic and international academic institutions. This has inculcated the culture of information-sharing, learning and innovation to individual landowners and farmers, as evidenced by the establishment of informal study groups amongst farmers.

However, an important limitation bears mentioning: linking into pre-existing local structures which purport to be representative but are in fact not inclusive may perpetuate exclusive networks and undermine the legitimacy of the intervention. Leach, Mearns and Scoones (1999) identify this as a common risk in NRM interventions which resonated in the case studies. It is for this reason that LandCare must be deliberate in its bridging emphasis to ensure that the socio-economic cleavages that persist within South Africa society across class, race and gender are not transmitted and institutionalised into the environmental stewardship networks it seeks to strengthen. Although there was not any overt evidence that this occurred in the five cases under assessment, it certainly remains a risk identified in international literature which is particularly acute in the South African context.

Caveat: personality-driven vs. programmatic modes of operation

While in line with experiences of LandCare in Australia, the weight placed on LandCare champions can also be interpreted as an organisational vulnerability. Deficits in individual competence, versatility or social aptitudes risk being extrapolated across the programme. Notwithstanding the adverse effects of spasmodic and unreliable external funding on local process management, some deficits in the characteristics associated with LandCare champions are inevitable and the programme needs to ensure it manages this risk.

It is apparent that insofar as agency can be provided to LandCare champions in negotiating dynamic and multi-scalar constraints and opportunities, this is advantageous to maintain in line with an adaptive management approach. However, programmatic systematisation around selection of spaces for intervention on the basis of principle-driven, rather than prescriptive and rule-based, informants may also help to ensure that too much liberty cannot be taken in this regard.

Such arrangements may also prove supportive of common parameters for capturing site specific social, agricultural-economic and environmental diagnostics. This in turn can inform the specification of objectives in an area, and the methods and instruments used for measuring and valuing those outcomes. Hajkowicz (2009) specifically notes this challenge in the Australian context, and it is one which played out in the course of seeking to commonly understand, frame and compare the cases under assessment in the Western Cape too.

Table 5. Comparative institutional framework

Theme/criteria	***Rietpoort***	***Heidelberg***	***Tesselaarsdal***	***Hex***	***Koup***
Strength of organization(s) worked with in the case	Weak. Social facilitation required.	Grootvadersbosch Conservancy. Strong.	Tesselaardal Action Group. Strong.	Very strong. Dynamic and capable leadership with aptitude for strategic thinking and building partnerships	Strong. Various local groups via LandCare Forum. Key individuals for leadership, trust and vision. Dynamic and capable leadership with aptitude for social facilitation.
Degree of stakeholder involvement in developing project	Limited. Farmers associations potentially important but self-limited by community conflict.	Strong. Self-initiative of local landowners under auspices of conservancy was critical success factor.	Some. Tesselaarsdal Action Group was important role-player.	Very strong. Success of project due to partnership between functionally complementary, locally active public sector entities,.	Very strong. Success of project due to coordinating self-initiative and resilience of farmers.
Adequately resourced	No	Somewhat. However, conservancy's support to secure financial buy-in from local partners and landowners is key.	Yes. However, almost entirely dependent on flood relief funding, which is intrinsically reactive and unreliable. This precludes Landcare team from facilitating social outcomes before, during and after physical intervention.	Operational funding limited, with small team. However, projects successfully resourced due to ability of LandCare official to secure financial buy-in from local partners and landowners. However, irregular and reactive availability of funding impedes ability for LandCare team to build trust relationship with individual landowners.	Operational funding extremely limited, with very small team. However, projects successfully resourced due to ability of LandCare official to motivate for/source episodic funding opportunities.
Agency developed for community involvement?	Re-established farmers' association. Engaged with SRM committee.	Yes, Conservancy was strong but pre-existing. Not due to LandCare involvement.	Yes. Tesselaarsdal Action Group active but pre-existing. Not due to LandCare involvement.`	Agencies developed or strengthened for local collaboration include UBCEG and SRM committee.	Yes. LandCare Forum established to facilitate local collaboration across local representative structures.

Theme/criteria	***Rietpoort***	***Heidelberg***	***Tesselaarsdal***	***Hex***	***Koup***
Relationship between LandCare and community (i.e. legitimacy)	Fair	Good	Good Primary relationship between LandCare, a small number of individual farmers directly involved in project, and Tesselaarsdal Action Group.	Good. Primary relationship between LandCare and water users' association, often via CMA.	Very good Primary relationship between LandCare district manager and a large number of individual landowners and small farmers across the district.
Were recipients of LandCare funds active or passive in the project process?	Passive	Active	Some individuals active, but passive in project and follow-up	Active. Independent contractors, landowners, farmers, schools, local agri-businesses all engaged.	Landowners / small farmers integral and active to project process.
What would have happened had LandCare not been involved	Fencing conflicts would most likely not be resolved.	Uncertain, but Grootvaderbosch may have ensured some projects would have occurred.	Uncertain whether engineering services would have built the structure. Alien clearing may still have occurred.	Structures would still exist. But the vitality and influence of local collaborative structures linked to the funding sourced by and technical assistance provided was by LandCare.	Funding would not have been secured without LandCare's initiative. Local networks would not have been established. Individuals farmers would be more vulnerable to drought and isolation.

Organised structures

The success and sustainability of projects requires a critical mass of social capital to secure farmers and landowners buy-in before, during and after the intervention. LandCare has in all cases worked with local organisations with different capacities and strengths as reflected in Table 5. LandCare has had varied experiences with these organisations around their activeness and passivity in implementation. In localised interventions such as Tesselaarsdal, these organisations have served as key points of entry into the communities that LandCare has intervened in.

LandCare appears to have achieved the more reliable success in cases where there was a well-established organised structure with a conservation agenda, as in Heidelberg and Hex River. These organised structures emerged to have had pre-existing social capital which is pivotal in securing farmers and landowners buy-in and effectively the success of programme. In cases such as Heidelberg and Hex River, programmes benefited by corralling the pre-existing social capital which accrue to well-established and effective organised structures, and bolster the social capital built up by LandCare through its provision of technical services (e.g. land use applications, drainage, etc.). In some cases these structures operate autonomously from LandCare, such as the Grootvadersbosch Conservancy in Heidelberg or the Tesselaarsdal Action Group, whereas in other cases these structures were highly dependent on LandCare, such as Hex River.

LandCare's role in building relationships with farmers is nonetheless equally salient. As revealed in the case studies, this relationship building process is different in each case study and dependent on the district manager's approach. It may manifest in the form of informal repeated interactions with farmers in Heidelberg and Koup or predominate via formal and organised structures.

The organised structures manifest in various forms throughout the case studies ranging from Water Users Associations, a conservancy, farmers' unions and an informal network such as UBCEG in the case of the Hex River valley. A key cross cutting feature in the different organised structures is the relationship that these organisations have with the landowners. The spaces in which LandCare operates and seeks to implement their interventions are negotiated spaces which are made up of various role-players all of whom have different interests and stakes within the area. Nevertheless, it is clear that in some instances LandCare's contribution predominates and in the absence of its involvement that it is unlikely these structures and groups would on their own be able to achieve the things that have been achieved with LandCare.

Awareness and learning

As part of building and networking communities, LandCare's approach envisioned that there would be a process that flows from this which yields broader awareness and understanding among potential stewardship stakeholders. In its most common form, this objective has taken shape through the establishment and implementation of Junior LandCare and other various occasional awareness raising efforts.

LandCare's role in awareness raising has generally emerged as an ad-hoc activity. Although awareness raising efforts differ on a case by case basis, a cross-cutting finding is that there is no systematic approach applied to initiating and implementing awareness raising events and projects. These efforts included cases where events such as farmers days were occasionally hosted and used as platforms to engage and raise awareness amongst landowners. In other cases, increased awareness was achieved through direct relationships that were built by LandCare staff with landowners and farmers. While in other cases, LandCare's awareness efforts have been strongly reinforced and built on pre-existing social capital that has been derived

from the active organisational structures within the area. It is evident that LandCare's approach to raising awareness is implemented in an unsystematic fashion.

In cases where there has been an active Junior LandCare initiative, the following has been observed: 1) there has been limited coverage in terms of the number of learners that the program reached (excepting Hex River); 2) LandCare emerged to have played a funding and to some degree a monitoring role in the implementation of these environmental educational initiatives; and 3) the irregular nature of funding has limited the sustainability of the initiative.

Due to the above-mentioned observations, there is insufficient evidence to conclude and report on the impact and outcomes that have emerged from and as a result of Junior LandCare. Similar to LandCare's awareness raising efforts, Junior LandCare has been implemented differently in the case studies. In some cases, it was driven, planned and implemented by the organised structure while in another case a procurement process informed by guidelines set by LandCare was followed. Again, this reflects LandCare's ad-hoc approach to awareness raising.

The evaluation however notes the lack of prioritised awareness raising in relation to sought out outcomes. Even in the cases where Junior LandCare initiatives have been active, there has been a lack of direct objectives that link and align Junior LandCare to LandCare's sites of implementation and the service that LandCare offers. The lack of a systematic approach to awareness and the misalignment to LandCare's holistic model partly explains the ad-hoc nature of both initiatives.

In addition, in cases where interventions have displayed increased awareness this has not necessarily translated to changes in agricultural practices. This is similar to the Australian experience where the LandCare programme had been regarded as a success in terms of awareness raising and engaging the communities in the 1990s. However, despite the increased awareness, questions were raised on whether changes in attitude and social network formations actually led to improved natural resource condition as it became apparent that environmental challenges (salinity, erosion, biodiversity loss etc) seemed to continue unabated in spite of the large number of LandCare groups created (Hajkowicz, 2009; Lockie & Higgins, 2007).

Table 6. Comparative outcomes

Theme/criteria	*Rietpoort*	*Heidelberg*	*Tesselaarsdal*	*Hex*	*Koup*
Environmental outcomes	Limited environmental impact observed. Erection of fencing would presumably improve veld management and render overgrazing more manageable. However, enduring internecine conflict may undermine efficacy of fences.	Strong, but not solely attributable to LandCare due to involvement of pre-existing Conservancy in the area.	Moderate. Aggressive erosive process addressed, but subsequent clearing and embankment grazing persist as key issues.	Significant outputs (e.g. aliens cleared) but flood mitigation and water conservation outcomes difficult to discern owing to the drought. Economic value of water saved through alien clearing, reduced risk of catastrophic flood damage.	Considerable: improved veld management due to fencing. Overgrazing better managed through conditional drought relief, coordinated by LandCare.
Economic-agricultural outcomes	Limited. Erection of border fence presumably reduce grazing conflicts with commercial farmer. Temporary work created, but inflamed inter-community conflict due to economic competition over contract work.	Strong: Job creation of local contractors and sustained clearing demand.	Highly localised. Loss of productive topsoil, water quality and flood damage risk reduced. Temporary local jobs created, but hindered by poor EPWP worker retention.	Strong: trust relationship sustained post-intervention between independent contractors and landowners, linked to emphasis on follow-up clearing. Down-stream value chains pro-actively cultivated and business development facilitated. Considerable scope for replication / scaling up of job-intensive alien clearing work.	Too early to tell (fence just completed and drought), Jobs created through fencing project. Small farmers supported through communal land fencing project. Coordination of drought relief to farmers.
Social outcomes	Limited. Underlying conflicts remain.	Strong: awareness, relationship building and social capital strengthening, but may have been the same without LandCare.	Limited community strengthening, environmental awareness. Lack of post-intervention ownership by local landowners.	Considerable: network strengthening, linkages with land holders. Securing funding-backed commitment and ownership from farmers, WUAs.	Considerable: community strengthening; stewardship of environmental issues.

Theme/criteria	*Rietpoort*	*Heidelberg*	*Tesselaarsdal*	*Hex*	*Koup*
Unintended outcomes	Exacerbated tensions between communities owing to conflict over economic opportunity. Physical interventions without requisite buy-in or securing commitment from local community may create or perpetuate passive role of citizen in terms of responsibility for sustainable resource management.	Agri-tourism benefits and conditions of Overberg water supply.	Large-scale investment in 'bricks-and-mortar' solution without requisite buy-in or securing commitment from local landowners may create or perpetuate passive role of landowner in terms of responsibility for sustainable resource management. Considerable benefits to small businesses involved in contract work.	Replication of alien clearing model by WWF-SA / Wolseley WUA, funded by corporate donors. Monetisation of plant material cleared as part of alien clearing alleged to result in selective clearing of more woody (i.e. more lucrative) sections. However, this point remains contested and undetermined.	Ongoing research collaboration with academic institutions. Potential for securing international donor funding.

Outcome achievement

Four types of outcomes are identified in the Theory of Change: three deliberate (i.e. agricultural-economic, environmental and social), and one unintended as per Table 6. As we have previously discussed, the distinction between agricultural-economic and environmental is technically inextricable when it comes to sustainable resource management. The relative emphasis in explicit project identification, prioritisation and intervention is typically a product of the local and external stakeholder landscape. Analytically, the distinction between agricultural-economic and environmental may be related to scale, complexity, time-frames and norms. For example, the benefits of alien clearing may be expressed either in terms of agricultural-economic or environmental outcomes. However, the criteria for quantifying impact varies based on the scale of consideration (i.e. site-level or catchment-level), complexity (i.e. linear or feedback), time-frames (i.e. short-term or. long-term) and norms (e.g. biodiversity has intrinsic value). On the other hand, social outcomes are not a goal for their own sake but rather a means to effectively deliver on LandCare's core mandate, in the context of NRM systems. In other words, social interventions are instrumental rather than ultimate objectives.

This is not to diminish the importance of social outcomes – indeed, as have been shown, in some cases LandCare's facilitation role has made greater contributions to securing agricultural-economic outcomes than any single bricks-and-mortar intervention. The importance of social outcomes is evident in the table: with one exception, social outcomes were foundational to agricultural-economic and environmental outcomes. The exception is Tesselaarsdal, where the socially-oriented activities were dwarfed in scale and cost by the physical intervention. The associated cost may even raise legitimate questions of equity: spending tens of millions of Rands to stabilise a stream benefiting a handful of landowners. It is also important to recall that the cost of the physical intervention and the ensuing imbalance between technical and social investment was not caused by climate change or local geology. It was also not caused by non-viable farming practices. Ultimately, the scale of the problem was caused by the ten years which passed between the first reporting of the gulley in 2003 and the eventual response by DRM in 2013. It was during this time that a small, easily remedied problem deteriorated into a major civil works project.

LandCare's interventions have achieved success in providing short-term employment opportunities in most cases, for people within the local communities in which the interventions are being implemented. The extent to which these job opportunities extended into sustainable livelihoods varies on a case by case study. In some case studies, LandCare has directly contributed to sustaining these jobs. It emerged that in these cases, the organised structures active in the area also contributed and played a significant role in facilitating relationships between farmers and contractors. This relationship has provided contractors with alternative sources of employment where farmers have privately offered employment opportunities mainly in the form of follow up alien clearing to independent contractors outside the scope of LandCare's funding and budget.

Gauging and comparing the agricultural-economic and environmental outcomes involves looking at the same set of effects using different analytical lenses. This also has implications for the ability of the evaluator to observe and measure outcomes. For instance, it is difficult to directly observe the agricultural-economic impact of flood damage risk reduction in the short-term during a protracted drought, and absent of a significant rainfall event. At the same time, it is difficult to observe the agricultural-economic benefit of alien clearing on a site-specific basis, without the benefit of a catchment-wide evaluation over an extend period of time, as was highlighted by Lovell et al (2002) earlier in the course of this evaluation. Conversely, fencing may have immediate agricultural-economic benefits to farmers; however, the long-term impact of restricting wildlife migration on overall ecological functioning is difficult to assess without the benefit of time. Thus, the evaluation of impacts are contingent on

the analytical lens used and with acknowledgments to the limitations of this evaluative process.

For the erosion prevention structures that have been constructed either within wetlands or rivers, the structures have certainly minimised the downstream impacts of the erosion. In cases where respondents reflected on the benefits of these structures, reference was made to improved water quality and water flow downstream.

In alien clearing projects, these opportunities manifest in the further economic opportunities derived from the wood. Mulching and chipping processing of the wood has created opportunities for small businesses.

Lastly, the extent to which virtuous, unintended impacts have emerged from LandCare intervention appears to be closely linked to the depth of social intervention. That is to say, the extent to which LandCare has sought to strengthen social networks amongst local structures, and those structures and landowners. It is this model of self-reliance, collaboration and ownership that has stimulated emergent benefits through replication beyond the geographic and temporal limits of the initial intervention itself. For example, the alien clearing model conceived by LandCare in the Upper Breede has emerged as best practice, replicated by other structures funded by entirely novel coalitions of partners – in this case, WWF-SA's partnership with Wolseley WUA, funded by Woolworths and Coca-Cola. In the Koup region, the LandCare Forum has stimulated the formation of study groups amongst farmers. In other cases where social intervention was comparatively weak, deleterious unintended consequences emerged, such as the intensification of internecine conflict arising from economic competition over contract.

6 Synthesis of findings

The following section seeks to synthesise the findings in relation to the overarching evaluation questions.

6.1 How did the programme change people's and community perceptions about caring for the environment?

The evaluation has sought to understand change in people's and community perceptions about caring for the environment. In the five cases of this evaluation, it emerged that LandCare has contributed to community perceptions about caring for the environment to varying degrees. Where there is a strong stakeholder network focus in place, community perceptions about caring for the environment appear most positive. Inversely, where LandCare's implicit social facilitation role was not embraced (e.g. Rietpoort and Tesselaarsdaal), evidence of changes in community perceptions about caring for the environment appear slim to none. Whether or not LandCare significantly changed the pre-existing community perceptions could not be conclusively determined across cases. It was nevertheless clear that LandCare has made a contribution to reinforcing the observed positive community perceptions in terms of caring for the environment, and this is a notable contribution in its own right.

There is also some evidence from the case studies that Junior LandCare has served an awareness raising function, although not necessarily among the same communities which are immediately affected by LandCare's intervention and the technical services it has provided. There is nevertheless a disconnect between the participants of Junior LandCare (e.g. adolescent learners) as a target group and the stakeholders whose more immediate behavioural change (e.g. farmers and staff) is sought in relation to the agricultural-environmental issues to which LandCare responds. LandCare's ability to influence community perceptions about caring for the environment ultimately rests on it being more deliberate and strategic about whose

perceptions it seeks to change, why it wants to change them and how it chooses to do so.

6.2 What are the socio-economic and environmental benefits of the work done through LandCare when taking climate change strategies and other national and international agreements into account?

The socio-economic and environmental benefits of the work done through LandCare are variable across cases and contextually informed. In none of the cases included within this evaluation can the full suite of outcomes assessed be attributed exclusively to the role or intervention of LandCare as they have all occurred in contexts where a range of actors, both internal to the WC DoA and external to it, have been or are currently involved, sharing similar aims and objectives and with a stake in the results. LandCare's contribution to the socio-economic and environmental outcomes has ranged from the more considerable to the marginal.

What does distinguish LandCare is its adaptive management approach and ability to pivot between different stakeholders, activities, services and initiatives. LandCare implements initiatives which fall within the broad parameters of the priority areas set-out in the SmartAgri-Plan. However, the extent to which considerations of climate change strategies and agreements actually inform its selection of sites and projects for implementation appears limited outside of reactive cases linked to DRM funding.

In addition, the evaluation found that the classification of AWP as a type of "project" reflects a lack of a programmatic understanding about how LandCare could apply this as an embedded approach. In the absence of LandCare having a programmatic process for determining which projects it pursues where, it then becomes extremely difficult to draw a relationship between the desired outcomes of the broader policies with the strategies employed for the actual project implementation on the ground.

6.3 Is the LandCare methodology of implementing projects in partnership of community based natural resource management effective when compared with other similar programmes?

LandCare's methodology and adaptive management approach is distinct and agile in relation to other programmes. LandCare can adapt and respond across environments and challenges. LandCare is able to work across these other initiatives and link them into stewardship networks around which they can coordinate and derive efficiencies too. LandCare can do many different things with its technical expertise, at different times and in different sequences to facilitate behavioural change and support achievement of the overall results it prioritises within an area.

Another area of LandCare's approach that is both an advantage and a risk for the programme is how it operates to secure funding. Whereas similar programmes tend to have more substantial and regular funding streams, LandCare leverages opportunity from various funding streams and works across them, linking, filling gaps and connecting to do more with scarce resources.

One of the shortcomings identified in this evaluation is that the potential of this methodology is not yet adequately realised by the WC DoA because of the ad-hoc and reactive manner in which some projects have been undertaken.

7 Conclusion

The evaluation concludes that the LandCare model is unique among related programmes as it employs an adaptive management approach and operates with an

intentional agility. LandCare's adaptive approach lends itself to contextually informed responses to agricultural-environmental issues in partnership with a diverse range of actors. However, despite LandCare's unique model, WC DoA LandCare has not been clear or coherent in approaching areas of intervention systematically in terms of the inter-related social, agricultural-economic and environmental outcomes it seeks to achieve.

The lack of a programmatic approach has been most apparent in terms of achieving social outcomes. LandCare's contribution to sustainability recognises that the social, agricultural-economic and environmental spheres interface as complex systems. Although the social sphere is a common point of entry, the lack of a more explicit intention in the social space has resulted in limited apparent change in social outcomes.

Funding has emerged as a key cross-cutting factor that influences where and when LandCare has been implemented in the cases studied. The nature of funding is unreliable, conditional and spasmodic. Despite the challenges associated with funding, LandCare has still emerged to use its distinct flexibility to contribute to environmental and economic-agricultural outcomes. The programme generally contributed to positive environmental outcomes.

When taking climate change strategies and policy into account, it is clear that some of the work that LandCare does is squarely in line with this and contributes to mitigation and environmental resilience. However, the lack of a common understanding among LandCare role-players and stakeholders limits its potential to contribute to broader outcomes in this space.

8 Recommendations

8.1 Design recommendations

1. **LandCare should be clarified as a programmatic intervention[6] with spatially defined areas in which it seeks to coordinate its activities with those of other stakeholders**.
    - This will support both responsive and proactive interventions in which identified agricultural-environmental issues and risks can be addressed in a coordinated manner in relation to contextually informed and differentiated objectives.
    - WC DoA should systematically set out which types of agricultural-environmental issues it will prioritise addressing and why, and specify the kind of results it seeks to achieve in different contexts.
2. **WC DoA should define the criteria for prioritising the spaces in which LandCare seeks to drive sustainable natural resource management within an adaptive management approach.**
    - Criteria for prioritisation and definition of the spaces in which LandCare seeks to achieve outcomes should be set.
    - Importantly, these criteria can be explicitly informed by climate change strategy, national and provincial policy priorities and should inform funding allocations. In this way, prioritised spaces can inform the coordination of projects, where a mainstreamed AWP approach is compatible.

[6] Reference should be made to the Department of Planning, Monitoring & Evaluation's *Guideline 2.2.3- Guideline for the planning of new implementation programmes.*

3. **WC DoA LandCare should build its capacity for social facilitation to expand environmental stewardship networks across socio-economic contexts.**
    - LandCare can be more systematic about the bridging component of its work by embarking on basic diagnostics of the social contexts in the spaces it prioritises by building upon the capacity it has and enhancing its capabilities to undertake social facilitation.
4. **WC DoA LandCare should develop a results-based planning, monitoring & evaluation toolkit that is differentiated based on the nature of the LandCare case, service provision and stage of implementation**.
    - The use of more structured planning, monitoring and reporting instruments from the outset will assist with diagnostics that align to better implementation monitoring and reporting to contextually specified outcomes.

8.2 LandCare implementation recommendation

5. **WC DoA LandCare needs to set out the steps and platforms it uses for appropriate communication and coordination of planning and implementation with other institutional actors to avoid duplication of efforts.**
    - Lateral planning, coordination and prioritisation needs to occur from province down to site-level in a transparent and mutually understood manner. AWP thinking should effectively filter up and be mainstreamed.
6. **Lastly, the following Theory of Change should be considered as a more optimal reflection of LandCare's programme theory going forward.**
    - The main changes to the Theory of Change reflect in the addition of a range of assumptions at key junctures of the process which need to be met in order for intervention logic to hold.

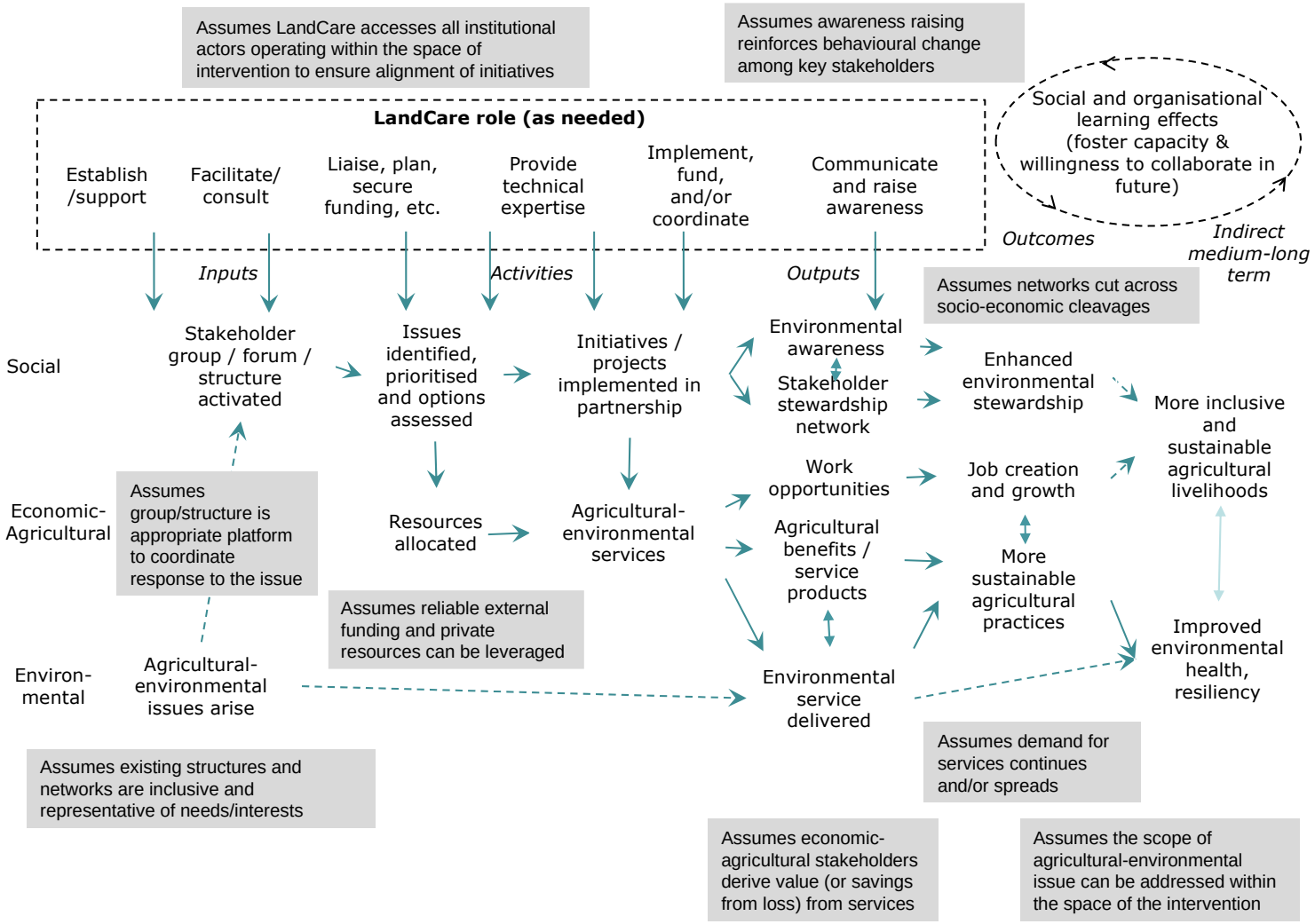

Figure 4: Optimised Theory of Change for WC DoA LandCare

References

Anette, K. 2014. *Water stewardship experiences in the Western Cape*. [Online], Available: www.waterriskfilter.panda.org [2018, October 01].

Casidra. 2014. *Casidra Annual Report*.

Casidra. 2015. *Minutes of tender adjudication meeting bid 55-2015*.

Muller, J. 2016. *Duivenhoks River Alein Clearing Business Plan*.

Nattrass, N., Conradie, B. & Conradie, I. 2015. The Koup fencing project: community-led job creation in the Karoo. *African Journal of Agricultural and Resource Economics*. 10(2):131–145. [Online], Available: http://www.afjare.org/resources/issues/vol_10_no2/4 Nattrass et al.pdf%5Cnhttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=caba6&AN=20153217770%5Cnhttp://library.wur.nl/sfx_local?sid=OVID:cabadb&id=pmid:&id=doi:&issn=1993-3738&isbn=&vo.

Prager, K. & Vanclay, F. 2010. Landcare in Australia and Germany: comparing structures and policies for community engagement in natural resource management. *Ecological Management & Restoration*. 11(3):187–193.

Reed, C. 2014. *Freshwater impact assessment for the Construction of proposed riverbank rehabilitation structures in the Duivenhoks river*. Aquatic Consulting.

Tennent, R. & Lockie, S. 2015. Natural resource management in Australia A historical summary. In M. Hogan, A and Young (ed.). (Routledge Advances in Regional Economics Science and Policy) *Rural and Regional Futures*. 71–83.

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