TRANSFORMATIVE COLLABORATIVE GOVERNANCE RELATIONS TOWARDS SUSTAINABILITY: THE CASE OF THE STELLENBOSCH RIVER COLLABORATIVE

Charon Lynette Büchner Marais

Dissertation presented for the degree of

Doctor of Philosophy

in

Business Management and Administration in the Faculty of Economic and Management Sciences

at

Stellenbosch University

Supervisor: Dr Rika Preiser
Co-supervisor: Associate Prof Oana Branzei

December 2016

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DECLARATION

By submitting this dissertation electronically, I declare that the entirety of the work contained herein is my own, original work, that I am the sole author thereof (save to the extent explicitly stated otherwise), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights, and that I have not previously submitted any of it in its entirety or in part for obtaining any qualification.

Charon Lynette Büchner Marais   December 2016

ACKNOWLEDGEMENTS

It is with deep gratitude that I conclude this journey in my life. It was a tough six years, but was never lonely. I owe my success to many people.

My family and friends always kept me grounded in love with their support. Thank you for never giving up on me, and freely giving your support and encouragement all the way, especially during long lonely hours and times of frustration. It meant the world to me, and I look forward to do life with you again.

- I need to thank the following people by name.
    - To my partner, **Maryan,** who endured and was strong when I needed it most, you are my rock and my safe place. Thank you for your unfaltering belief in me, your practical support and assistance, the many cups of tea, and countless surprises and treats to keep me going.
    - To my daughters, **Nadia and Michelle**, who kept on believing that this day will arrive. You both inspire me with your lives and accomplishments in so many ways. I am so proud of you!
    - To my son, **Charl,** your dreams and our many conversations keep inspiring me. Your warm hugs and checking in on me to make sure I still cope always lifted my spirit, I am proud of the young man you became, I am excited for your future.
    - To my **Parents** for your prayers and support, your many calls and messages to encourage me, you gave me my indomitable spirit and taught me education is never complete, thank you.

I am grateful for the commitment of my **supervisors,** and perseverance in their constructive feedback, passionate guidance and support to bring this research to fruition. You inspired me to hold true to my own passion, to find my voice and to trust myself.

- My deepest appreciation goes to my external supervisor, **Prof Oana Branzei**, for committing herself as my co-supervisor 'in a heartbeat' at the 4th International Symposium on Cross Sector Social Interactions in Boston in 2014. My research journey turned less lonely and more exciting. Our many long distance discussions and interactions sustained me. Oana was a beacon of light, particularly during my participation at the 7thAnnual PhD Sustainability Academy in 2014 at the Western University in Canada. She continuously stretched me and shaped my understanding of what was at stake.
- To my South African supervisor, **Dr Rika Preiser**, thank you for accepting me as your first doctorate student midway through my research in 2014. It was a hard journey, but your

care, passionate determination and guidance tempered the challenges, and pursued the possibilities. Thank you for your accessibility and wonderful insights, our endless discussions on the way forward. You were always willing to work with something different from the norm, and never forced me into a mould of existing convention. I have learned so much with you; I am privileged and proud to have completed my research with you as my supervisor.

℘ I would like to acknowledge my examiners for their time and valuable inputs to improve the quality of this research.

℘ To **Marietjie Strydom**, thank you for your valuable time and commitment to format my dissertation, and caring for **my illustrations.** I am so proud of this dissertation that wears your signature; your dedication and inputs to my final product did me proud.

℘ **I also wish to thank Dr** Elsabe Pepler for doing such a great job editing my dissertation.

To all the stakeholders who were involved in this important study, I want to express my gratitude for your valuable time and commitment to constructively contribute to my research, These are: **Distell, Spier, Stellenbosch Municipality, Wynland Water Users Association, the Department of Water and Sanitation, Stellenbosch University Water Institute, the Western Cape Department of Environmental Affairs and Development Planning, Cape Nature** and **WWF-SA.** I specifically want to acknowledge **Jacques Rossouw, Andre van Niekerk, Heidi Newton-King, Professor Gideon Wolfaardt, Melissa Lintnaar-Strauss, Quinton Brynard,** and **Christine Colvin** for their input.

℘ I lastly wish to extend my gratitude to the following institutions:

- **The University of Stellenbosch Business School (USB)** for the bursary and opportunity to participate in the 20th EDAMBA Research Summer Academy in Soreze, France in 2011;
- **The Ivey Business School s**ponsorship to participate in the 7th Annual PhD Sustainability Academy co-hosted by the Ivey Business School and Alliance for research on Corporate Sustainability (ARCS) in 2014; and
- To the **WWF Nedbank Green Trust Partnership**.

ABSTRACT

This thesis challenges and complements the transdisciplinary inquiry into the governance of commons. Using a combination of auto-ethnography and participatory action research I contribute to the call to "rethink governance in management research" (Tihanyi, Graffin & George, 2014: 1535). I approached this exploration by revealing how corporate actors engage with a variety of stakeholders and public and private partnerships, and work at different levels of analysis to make and sustain shared commitments to an endangered commons. The thesis inductively shows how corporate actors broaden their understanding of what constitutes governance and when, why and especially how they progressively and cooperatively reclaim governance responsibility and authority beyond the existing corporate boundary and jurisdiction.

Elinor Ostrom received the Nobel Prize in Economics in 2012 for her reinterpretation of Stakeholder Theory to emphasize the multiplicity, variety and legitimacy of stakeholder interests in contexts where attempts at and terms of collaborative investments are held back by disagreements, ambiguity, and complexity. While Ostrom's work brings the socio-economic eco-system to the foreground of governance, it underspecifies how corporate actors (re)engage with natural objects within the commons they are working to protect and preserve, and how these engagements update their own understanding and practice of corporate governance.

My four-year participatory action research facilitated, documented and reflected on the shifting contributions of corporate actors in the collaborative emergence of the Stellenbosch River Collaborative (SRC) in the Eerste River Catchment (ERC) in South Africa. I inductively develop new theory on the transition of corporate actors from transactional to transformative governance by showing how they gradually re-defined their relationship with a natural object within the socio-economic ecosystem they were embedded in and interdependent with (the Eerste River). By developing, defining and illustrating three sequential stages of engagement by corporate actors with the river, and explaining how their conceptualization of what constitutes governance shifts from stage to stage, I "broaden the scope of future work on governance" (Tihanyi *et al.*, 2014: 1541), to more explicitly include the role of place in general and natural objects in particular.

The thesis also proposes a novel methodological approach to carry out transdisciplinary inquiries of socio-economic eco-systems. I furthermore explain how methods can be combined, adjusted and continuously updated to track the framing and resolution of wicked

problems. In so doing, the thesis builds and broadens the methodological toolkit suitable for studying wicked problems in other social-economic systems (SES).

The induced concepts additionally yield important lessons for corporate actors, especially those seeking to become more proactively in the commons they inhabit, by demonstrating how they can deliberately transcend an exploitative frame and move towards a collaborative one. It furthermore explains how corporate actors come to include – rather than exclude – natural objects within their socio-economic ecosystems in their corporate governance mandates and practices.

Overall, this thesis advocates for new possibilities for corporate governance. My inductive theory building acknowledges the centrality of natural objects in the governance of commons and reveals the interactive role of place by gradually changing who and how works to protect and preserve the commons.

Key words: transformative governance, place-based, sustainability, social-ecological systems, multi-stakeholder collaboration, stewardship, transdisciplinary research, qualitative PAR, auto-ethnography, narrative dialogue

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OPSOMMING

Die verhandeling bevraagteken en komplementeer die transdissiplinêre (TD) ondersoek na die beheer/bestuur van gemeenskapsbesit. Deur die gebruik van 'n kombinasie van outo-etnografie en deelnemende aksie-navorsing maak ek 'n bydrae tot die oproep om "beheer opnuut in bestuursnavorsing te herdink" (Tihanyi, Gaffin & George, 2014:1535). Ek het die ondersoek benader deur daarop te wys hoe korporatiewe aandeelhouers met 'n verskeidenheid van belanghebbendes, openbare en private vennootskappe skakel, en op verskillende vlakke van ontleding saamwerk om gedeelde belange en voortgehoue toewyding tot 'n bedreigde gemeenskapsbesit in stand te hou. Die verhandeling bevestig by wyse van induktiewe navorsing hoe korporatiewe rolspelers hul begrippe oor wát bestuur daarstel, verbreed, en wanneer, waarom en veral hoé hulle progressief en samewerkend die bestuur, verantwoordelikheid en mag terugeis van buite die bestaande korporatiewe grense en bevoegdheid.

Elinor Ostrom het in 2012 die Nobelprys in Ekonomie vir haar hervertolking van die polisentriese stelselreaksie (*Stakeholders Theory*) ontvang, om sodoende die verskeidenheid, veelvuldigheid en legitimiteit van aandeelhouers/belanghebbendes se belange in kontekste te beklemtoon waar pogings tot en terme van gesamentlike beleggings as gevolg van verskille, dubbelsinnigheid en kompleksiteit weerhou word. Hoewel Ostrom se werk die sosio-ekonomiese ekosisteem na die voorgrond van bestuur bring, spesifiseer dit steeds nie presies hoe korporatiewe belanghebbendes met natuurlike voorwerpe binne die *commons* omgaan wat hulle beoog om te beskerm en te behou, en hoe hierdie verbintenisse hul eie begrip en praktyk van korporatiewe bestuur beïnvloed nie.

My vier-jaar-lange deelnemende aksie-navorsing het die verskuiwende bydraes van korporatiewe rolspelers in die gesamentlike daarstelling en groei van die *Stellenbosch River Collaborative* in die Eersterivier-opvangsgebied (ERC) in Suid-Afrika gefasiliteer, gedokumenteer en gereflekteer. Ek het induktief 'n nuwe teorie met betrekking tot die oorgang van die korporatiewe belanghebbendes vanaf transaksionele na transformatiewe beheer gebou en ontwikkel, deur te verduidelik hoe hulle geleidelik hul verhouding met 'n natuurlike objek in die sosio-ekonomiese ekosisteem – waarin hulle gebaseer en van interafhanklik is – herdefinieer het. Deur dié ontwikkeling, herdefiniëring en toeligting van drie opeenvolgende fases van verbintenis van korporatiewe rolspelers met die rivier, en 'n verduideliking hoe hulle hul eie konseptualisering van wát bestuur daarstel van fase tot fase ontwikkel het, het ek

"toekomstige werk in bestuur verbreed" (Tihanyi *et al.*, 2014: 1541) – veral om die rol van plek in die algemeen, en natuurlike voorwerpe in besonder, meer pertinent in te sluit.

Die verhandeling hou 'n nuwe metodologiese benadering voor, by wyse waarvan transdissiplinêre ondersoeke van sosio-ekonomiese ekosisteme uitgevoer kan word. Ek verduidelik hoe metodes voortdurend gekombineer, aangepas en opgedateer kan word ten einde die opstelling en oplossing van taai, weerstandige probleem (*wicked problems)* in ander sosio-ekonomiese ekosisteme te volg. Sodoende bou en verbreed die verhandeling die bruikbare metodologiese toerusting vir die bestudering van sodanige weerstandige probleme in ander sosio-ekonomiese ekosisteme.

Die geïnduseerde konsepte hou belangrike lesse vir korporatiewe rolspelers in, veral vir diegene wat daarna streef om meer proaktief op te tree in die *commons* wat hulle bewoon. Dit wys hoe hulle doelgerig 'n uitbuitende raamwerk kan oorkom en na 'n meer samewerkende sisteem kan beweeg. Dit demonstreer ook hoe korporatiewe rolspelers natuurlike objekte in hulle sosio-ekonomiese ekosisteme se korporatiewe bestuursmandate en praktyke insluit, eerder as uitsluit.

Uiteindelik betoog die verhandeling vir nuwe moontlikhede en metodes van korporatiewe bestuur. My induktiewe teorie-bou erken die sentraliteit van natuurlike objekte in die bestuur van gemeenskapbesit, en openbaar die interaktiewe rol van plek, deur die geleidelike verandering van hoe en deur wie daar gewerk word om die gemeenskapsbesit te beskerm en bewaar.

Sleutelwoorde: transformerende regering/bestuur, plek-gebaseer, volhoubaarheid, sosiaal-ekologiese sisteme, veelvuldige aandeelhouer-samewerking, diensbaarheid, transdissiplinêre navorsing, kwalitatiewe Deelnemende Aksie Navorsing (PAR), outo-etnografie, narratiewe dialoog.

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AaR	Adopt-a-River initiative
ANC	African National Congress
BCF	Blaauwklippen Community Forum
BCP	Blaauwklippen Community Platform
BOCMA	Berg Olifant River Catchment Management Agency
BRIB	Berg River Irrigation Board
BRIP	Berg River Improvement Program
BWI	Biodiversity and Wine Initiative
CEO	Chief Executive Officer
CMA	Catchment Management Agency
COO	Chief Operations Officer
CoP	Community of Practice
TCG	Cross-sector Collaborative Governance
CSR	Corporate Social Responsibility
CSI	Corporate Social Investment
DA	Democratic Alliance
DEA	Department of Environmental Affairs
DEA&DP	Western Cape Government Department Environmental Affairs and Development Planning
DUCT	Duzi-Umngeni Conservation Trust
DWA	Department of Water Affairs, renamed as Department Water and Sanitation
DWS	Department Water and Sanitation
EP	Equator Principles
EPFIs	Equator Principles Financial Institutions
EPA	Environmental Protection Agency
ERC	Eerste River Catchment
ESG	Environmental, Social and Governance
ESKOM	Electricity Supply Commission
EU	European Union
FIFA	International Federation of Football Association
GRI	Global Reporting Initiative
HOA	Home Owners Association
HSP	Human Settlement Plan
IAP	Interested and Affected Parties

IDP	Infrastructure Development Planning
IIC	Infrastructure Innovation Committee
IMF	International Monetary Fund
IPC	Integrated Planning Committee
IPF	Integrated Planning Forum
IPFD	International Project Finance Debt
JDSD	Johannesburg Declaration on Sustainable Development
JPIR	Johannesburg Plan of Implementation Response
JPOI	Johannesburg Plan of Implementation
JSE	Johannesburg Stock Exchange
LIA	Learning and Innovation Approach
MDG	Millennium Development Goals
MEC	Member of the Executive Council
NBI	National Business Initiative
NEMA	National Environmental Management Act
MPRDA	Mineral and Petroleum Resources Development Act
NGO	Non-governmental Organisation
NGOs	Non-governmental Organisations
NPO	Non-profit Organisation
NPOs	Non-profit Organisations
NWA	National Water Act
OECD	Organisation for Economic Cooperation and Development
PAR	Participatory Action Research
REMF	Rector-Executive Mayor Forum
RHP	River Health Plan
SABC	South African Broadcasting Corporation
SAFL	South African Food Laboratory
SANRAL	South African National Roads Agency
SC	Steering Committee
SDF	Spatial Development Framework
SDG	Sustainable Development Goals
SES	Social-Ecological System
SESs	Social-Ecological Systems
SI	Sustainability Institute
SITT	Stellenbosch Infrastructure Task Team
SLP	Social and Labour Plan
SM	Stellenbosch Municipality

SRC	Stellenbosch River Collaborative
SU	Stellenbosch University
SURB	Stellenbosch Urban River Basin
SUWI	Stellenbosch University Water Institute
SWC	Stellenbosch Water Collaborative
TCG	Transformative Collaborative Governance
TBL	Triple Bottom Line
TD	Transdisciplinary
TOR	Terms of Reference
UCoP	Community of Practice
UCT	University of Cape Town
UKZN	University of KwaZulu-Natal
UN	United Nations
UNDP	United Nations Development Programme
UNGC	United Nations Global Compact
UP	University of Pretoria
USB	University of Stellenbosch Business School
VW	Volkswagen
WBCSD	World Business Council for Sustainable Development
WC	Western Cape
WCED	World Commission of Environmental and Development
WHO	World Health Organisation
WISA	Water Institute of South Africa
WRC	Water Research Commission
WSSD	World Summit on Sustainable Development
WWF	World Wildlife Fund
WWF-SA	World Wildlife Fund South Africa
WWTP	Waste Water Treatment Plant
WWUA	Wynland Water User Association

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

Repair and protection of commons have become major challenges on both the corporate governance (McGahan, 2014; Tihanyi, Graffin & George, 2014) and the corporate sustainability agendas (Walls, Berrone & Phan, 2012), as well as a growing concern for the role of business and theories of organizing more generally (Howard-Grenville, Buckle, Hoskins & George, 2014). Expectations of corporate actors continue to increase, with attention given to the differences between responsibility and sustainability (Bansal & Song, forthcoming), our knowledge about when, why and especially how corporate actors transition from transactional to transformative forms of business engagement in society (Aguilera, Judge & Terjesen, forthcoming; Ansari, Wijen & Gray, 2013; Mair & Hehenberger, 2014). This dissertation sets out to develop new theory by observing how corporate actors' interactions within and with their socio-economic eco-system (Grin, Rotmans & Schot, 2010: 107–108) challenge and complement current theories and practices of corporate governance.

I use a self-reflective account of how my role as a participant action researcher enabled corporate actors to interact with and interpret their changing roles within a broader quest to understand and repair the damage of a local social-ecological system. My findings reveal a critical and shifting role of place in general and natural objects in particular in gradually guiding corporate actors' transitions from transactional to transformation governance.

1.2 BACKGROUND

Starting out on this journey, I was interested in how corporate actors make decisions about responsibility and/or sustainability within the Stellenbosch region. I was intrigued to see how corporate governance approaches failed – and how they might eventually fit within and constructively interlace with central governance systems to repair and protect a precious commons.

My research was situated in the complex realities of pollution in the rivers of the Eerste River catchment area (ERC) in Stellenbosch in the Western Province, South Africa, mired in controversy and conflict due to escalating degradation and documented harm on multiple stakeholders. I framed the research process as a place-based study, because I was concerned about how actors-in-place worked together. I discovered that the place itself played a significant role in shaping how the actors understood the commons, and eventually motivated corporate actors to transition from transactional relationships, i.e. economically motivated exchanges, to a transformative collaborative whereby they became vested stewards of the commons they had earlier exploited, neglected, and depleted.

1.2.1 Motivation and conceptual clarification

My research started with corporate actors but was not restricted to them. I included all emerging stakeholders and captured the variety of prior and ongoing relationships among these stakeholders, as they became affected by the pollution of the Eerste River, or came to recognize and reclaim their relationship with the river. Because neither the stakeholder base nor the problem at hand were clearly defined at the beginning of my project, I focused my attention on the place, the Eerste River catchment area (ERC) in Stellenbosch.

I set out with actors who had been singled out as responsible for the damage, and gradually added stakeholders who became interested in the issue as it unfolded. By taking a place-based approach, I retained full flexibility to guide my research process in real time, and to examine the essential structures in this context. The place-based framing also allowed me to interact with natural objects in place, especially the river, and to observe how various stakeholder interacted with these natural objects over time. I iteratively updated my research methodology to include multiple tools so I could facilitate and document these interactions.

1.3 THREE PART DISSERTATION STRUCTURE

1.3.1 PART 1: Chapters 2 and 3 – Theoretical positioning

This study presents three responses to the intractable sustainability challenges that we are currently facing when looking for responses to governing the problems of the commons. These require a re-framing of governance approaches, the role of the corporate actor, the commons and the role place plays.

In Chapter 2, I discuss how corporate actors have traditionally dealt with the problem of the commons. I argue that a narrow understanding of corporate governance is no longer appropriate for current sustainability challenges. I review corporate governance frameworks

which update the interface between business in society over time, and introduce two integrative frameworks – one global (the GRI) and one local (the King III).

In Chapter 3, I elaborate on Ostrom's attention to natural objects within the commons (Ostrom, Burger, Field, Norgaard & Policansky, 1999, Ostrom 2009; 2010), introducing a biosphere-based understanding of sustainability in general and socio-economic ecosystems in particular. This helps to flag the disconnect between transactional approach to corporate governance and complex dynamics of life-supporting systems (Folke *et al.*, 2011: 720). In this chapter, I introduce the notions of complexity (Chu, Strand & Fjelland, 2003) and focus on self-organisation processes (Wells, 2012) to argue that solutions to complex challenges involve action across multiple and overlapping scales, and that attention to place raises new questions about integration across scales of governance and prioritising of issues will be problematic.

1.3.2 PART 2: Chapters 4 and 5 – Methodological and contextual positioning

I entered the site due to the phenomenon of pollution in the Eerste River in Stellenbosch. Given phenomena like this (often called wicked problems), traditional self-centric governance approaches are insufficient, but we do not know much about why or how actors might willingly transition to collaborative approaches.

I framed the research problem, which clarified and positioned the following interrogation.

 Research Question 1*: how do corporate actors shift from traditional to transformative governance approaches?*

From here, I continue to situate the research paradigm as a transdisciplinary (TD) approach in the Eerste River catchment area (ERC) of Stellenbosch in Chapter 4, and consequently contextualise the research in Chapter 5.

In Chapter 4, I describe how I assembled the methodological 'toolkit' with uniquely combined research instruments to engage with the contested space for studying the stakeholders' relationships in the Stellenbosch ERC. Using the TD research method allowed me to locate myself in a real-world setting to make sense of the complex relationships that marked the conflict between the opposing governance strategies in the ERC.

I used a TD approach to navigate a collaborative, integrative and recursive process in my role as bricoleur, mediator, social innovator and facilitator. I combined auto-ethnography and participatory action research (PAR) as qualitative research methods to highlight various

aspects of this place-based research in a heuristic, process-oriented approach to delimit the empirical base for this study.

Research Question 2 was thus formulated: *What role does place play to adjust the governance approaches in the commons?*

My data collection methods involved a combination of participant observation, key informants, unstructured interviews and facilitation of stakeholder meetings, focus groups and other transformative processes in order to maximise my role as primary research instrument. The active participation of all parties made it possible to transcend and integrate disciplinary paradigms in the search for a unit of knowledge beyond disciplines (Pohl & Hadorn, 2008; Van Breda, Musango & Brent, 2016).

Auto-ethnography is a form of qualitative research that allows the researcher to situate her/himself as an observer to reflect on, explore and interpret her or his personal experience. My experience resonates well with what is described in literature, where TD researchers often have to immerse themselves in the context and navigate science-practitioner interfaces by means of process-oriented, auto-ethnographic approaches (Flyvbjerg, 2001; Pohl *et al.*, 2010).

PAR is described as an umbrella term for the diversity of ideas and practices for a particular orientation of inquiry to do TD research in and with communities, stimulating and creating participation and action. PAR is not a case study approach; it is a dialectical orientation in a cooperative engagement between researchers and stakeholders to define a desired outcome, and to undertake well-informed actions that will expand their knowledge, enhance their competencies, and overcome challenges to achieve those outcomes (Rogers *et al.*, 2013). Action research is a process of generating personal and institutional change that comes with deep trust between all parties (Rogers *et al.*, 2013).

PAR allows the researcher to use scientific observation (through auto-ethnography and other methods for example) to become a form of intervention undertaken by the researcher. PAR allowed me to interweave my viewpoints with those of the many different stakeholders. I used reflective and collaborative methods to provoke the participating stakeholders in a collective explorative review of their responsibility for their actions in day-to-day life, and to consider how to change their actions. By being an embedded researcher, I combined my ethnographic data gathering method with a PAR approach that aligned well with what Van Breda and Swilling (2016) call 'Track II' and 'Track III' TD modalities. I engaged in an informal relationship building

process with the stakeholders to collaborate for better communication, understanding and exchange of information and to explore the relationships between the stakeholders.

It was not possible to begin with an over-structured research design and I had to rely on the emergent dynamics of the process to guide my interactions and activities. Framing the research as a TD place-based study allowed me to mirror the uniqueness of this context authentically, and to organise my research as a common learning and reflexive process that involved both the researcher and the stakeholders alike (Pohl & Hadorn, 2008).

In retrospective reflection of my journey, I could identify five distinct phases that marked my TD research process. I could not predict these phases ahead of my study and therefore there was no outline or schedule to guide my interactions and activities. Linking with the proposed Track III modality of doing TD research, it seems that my research journey emerged spontaneously in relation to how I progressively managed to make sense of the relationships and dynamics that connected and marked the stakeholders' interactions relating to shared water use in the ERC.

The following distinct phases of engagement characterised the TD process, in my research journey that spanned 42 months from May 2011 to November 2014:

1] PHASE 1: Scoping and exploring (May 2011 to September 2012),

2] PHASE 2: Identifying key stakeholders (May 2012 to June 2013),

3] PHASE 3: Action/Intervention (June 2013),

4] PHASE 4: Building partnerships and networks (July 2013 to November 2013), and

5] PHASE 5: Organising and establishing the Stellenbosch River Collaborative (SRC) (December 2013 to November 2014).

Chapter 5 provides the place-based context in which this TD process was situated. I reflect on the dynamics in this setting to contextualise my process and discoveries. I capture the dynamics of what the river is and what the river does for different stakeholders. I explain this as a complex Stellenbosch social-ecological system that can no longer be confronted in isolation. The Stellenbosch Municipality was pivotal in the problematic relationships within the community and other government agencies, as stakeholders were finding it hard to deal effectively with pollution.

Previous attempts by key stakeholders in industry and agriculture to cooperate with government agencies for finding sustainable solutions had failed. Threatening the Stellenbosch brand and economy, this had led to a breakdown in relationships, and the

prosecution of Stellenbosch Municipality for non-compliance of its water management mandate by the Department of Water and Sanitation (DWS).

Efforts and mounting pressure by different stakeholders to solve this problem and address the causes of pollution escalated conflict as a set of negative feedback loops. This fragmented the space and any likely cooperation to solve the common problems. The multiple expectations and perspectives emerging from the complex mix of related issues made it impossible to cooperate to find an obvious answer.

I facilitated and mediated an intervention in such a way as to introduce a governance approach that emerged from a bottom-up process of participation with and between the multiple stakeholders across sectors. This was possible because there was a great deal at stake for those involved in dealing with shared water use in the ERC area.

1.3.3 PART 3: Chapters 6 to 8 – A place-based TD research towards a TCG

In Chapter 6 I discuss how each of the five phases of my TD research process unfolded from a loose network of role players to an established network of committed and participating stakeholders, through reconnecting with complexity. I used a first-person narrative, in which I situated myself as the main research instrument in the process of documenting and mediating the cross-sector, multi-stakeholder relationships in the ERC.

In Phase 1, the process of scoping to develop an understanding of the SES stakeholder relationships that marked the unique SES and place-based challenges that decision-makers faced, turned into a long exploratory phase. I had to learn more about the issues, interests and perspectives of various governance approaches.

Phase 2 took another year of participatory action research, which was a crucial investment. In Phase 2, I explain that it is difficult to organise and analyse this phase chronologically in terms of actions, because of the intensive continuous mediating and facilitating between the key stakeholders. Activities involved navigating between meetings, informal and unstructured interviews, conducting a focus group, participating and observing on different platforms and engaging in generative dialogue to frame issues and interests to narrow down who the participating stakeholders should be.

Phase 3 focused on intervention and action, with the goal to create a self-sustaining system where stakeholders could interact and collaborate to manage their different interests in a self-sustaining way. I identified the key stakeholders as a community of interest and started a process of generative dialogue to open up a space to co-create a shared understanding and

knowledge from the many different perspectives and power structures. I used Theory U (see Chapter 6) as a mediating and meaning-making mechanism to frame a transformative learning journey and appreciative dialogue. I describe the learning journey outcomes and the way forward as a collective instruction and framework, characterising an established network of key stakeholders.

Phase 4 focused on the building of partnerships and expansion of a strong network linked to the newly forged relationships. This called for new options and pathways for governance systems to interact and coordinate ethically and transparently. This proved valuable when the impasse between the DWS and the Stellenbosch Municipality threatened to reach a stalemate in the collaborative space. With my mediation, this was changed into a catalytic moment to fast track the organisation and formalisation of a collaborative platform, which started to gain momentum, attracting interest from various role players in watershed management and technologies, and stewardship initiatives, such as the WWF.

In phase 5, the collaborative established a cross-sector collaborative governance framework, launched as the Stellenbosch River Collaborative (SRC). Getting the necessary support, the SRC collaborated with implementing agents and successfully secured WWF-Nedbank Green Trust funding to organise the SRC space into a steering committee with the founding members, including myself as the researcher and catalyst. I was appointed as the secretariat manager to coordinate the steering committee and manage its activities as an enabling space.

In Chapter 7, I review the essence of the problem, and consequently summarise and discuss my findings and the outcome of this dissertation. I briefly contextualise this collaborative process as the catalytic relational turnaround strategy for complex system transformation, and introduce the Cross-Sector Transformative Collaborative Governance (TCG) framework. I conclude by discussing the SRC as an outcome of this research journey, with a polluted river at its heart.

In Chapter 8, I provide a summary of the dissertation and reflect on the significance and shortcomings of the study.

A glossary is provided in Appendix 5 on page 183, to clarify governance terms and other concepts related to this study.

CHAPTER 2

GOVERNANCE, RESPONSIBILITY AND SUSTAINABILITY: LITERATURE REVIEW

2.1 INTRODUCTION

I started my research journey with current corporate governance frameworks that explain when, why and especially how corporate actors may engage in restoring and protecting the commons. I have a professional background as consultant for large corporate institutions and having recently completed a Master's degree in Business Management (MBA). This lead me to first approach the question from the perspective of corporate actors, asking how their corporate governance frameworks engage or disengage them from the commons they are embedded in and often exploit or at least rely on for value creation.

During the first year, my search steered me to the notion of social-ecological systems (SES) and I became curious about the interactions between corporate actors and the SES. To approach this revised research question, I switched to a transdisciplinary research lens that helped me deliberately integrate the scientific knowledge I gathered from systematically reviewing the literature on corporate governance with the practical experience of corporate actors working within the SES.

I iterated between Hardin's (1968) original argument about the "unmanaged commons"[1] and later elaborations on the possibilities of self-governance of commons by Elinor Ostrom who earned her the Nobel Prize in Economics in 2012 on one side, and the idiosyncrasies in corporate governance practices I observed on the other. I remain mystified by the gap that remained between science and practice, despite the multiplicity of corporate governance frameworks, which described and even prescribed how corporate actors could proactively contribute to different commons, from the local SES to global commons such as climate change (Howard-Grenville, Buckle, Hoskins & George, 2014).

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[1] Using the metaphor of the "tragedy of the commons", Hardin (1968: 1243) describes humanity as being trapped in a disempowering situation it cannot change, painting a pessimistic vision of human prospects on this earth (Ostrom, 2010; Ostrom *et* al., 1999).

2.2 THE PERSISTENT PROBLEM OF GOVERNING THE COMMONS: A BRIEF OVERVIEW

Hardin originally suggested that one key way in which the tragedy of the commons could be conquered, is to manage the commons centrally. That is, government ownership should replace private ownership, especially when commons are threatened or damaged (Hardin, 1968: 1243; Hardin, 1998). This compelling argument rallied wide support from many scholars and policymakers seeking to rationalise central government control of common-pool resources.

Ostrom (1990) counter-argued that private property is a preferable way to avoid the tragedy of the commons, especially when the aim is to protect biodiversity in natural resources and wildlife (Ostrom, 2007a). The tension between these two camps, centrally imposed regulation versus incentives for private engagement and efficiency in the public space, also known as the Pigovian approach or marketable "property rights" (Ostrom, 2009: 408; 2010: 1), continues to date. However, the space in-between is rapidly being filled by hybrid governance approaches, including cross-sector partnerships that bring together public and private actors and social innovation alternatives, which bridge public and private value creation models (McGahan, 2014).

2.3 THE ROLE OF CORPORATE ACTORS IN GOVERNING THE COMMONS

Corporate actors do not approach the commons with a blank slate. Starting with the Brundtland formulation of the idea of sustainable development (Brundtland, 1987; Aras & Crowther, 2008), multiple frameworks have been proposed, and adopted. There has also been repeated criticism[2] along with recent calls for differentiating responsibility from sustainability in both theory and practice (Bansal & Song, forthcoming).

The 1987 Brundtland Commission report (Brundtland, 1987) on sustainability defines the term 'sustainable development' as "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs" (Höver, 2004: 93).

This definition is widely accepted and still used in policies in the United Nations (UN), nation-states and big business (Aras & Crowther, 2008). Some claim (e.g. Aras & Crowther, 2008:

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[2] According to Rossouw and Van Vuuren (2004), the current mode of human consumption is destroying the planet, and modern corporations are exacerbating this problem (Biggs *et al.*, 2015; Chakrabortty, 2016; Crutzen, 2002; Fig, 2007; Ostrom, 2007; Smit, 1992; Steffen *et al.*, 2007). Our levels of production and consumption are depleting non-renewable resources and increasing our levels of pollution – we are seriously endangering the future of the earth (Chapin *et al.*, 2009; Folke *et al.*, 2002; Greig *et al.*, 2007; Holling, 1986; Whiteman *et al.*, 2013).

434) that the Brundtland definition of sustainability has set a clear moral compass; yet, it fails to provide any practical guidelines for how business should reconcile its fiduciary responsibility (i.e. profit) to shareholders with its newfound responsibilities to people and the planet. The relationship between sustainable development and corporate interests remains limited to corporate interests, clearly seen in the rapid decline in resources and continuous incidents of corporate scandals that have global reach and unforeseen consequences (Aras & Crowther, 2008: 433, 434; Kolk, 2008: 3; Laszlo & Zhexembayeva, 2011; Walls *et al., 2012*).

The theory of stakeholders (Rossouw & Van Vuuren, 2004: 80-85) similarly delimits the sustainability debate to organisational and fiduciary responsibility in terms of risks and opportunities in relation to societal and environmental challenges. This has narrowed the sustainability concept to "meeting the needs of the firm's direct and indirect stakeholders such as shareholders, employees, clients, pressure groups, communities without compromising its ability to meet the needs of future stakeholders" (Eweje, 2011:128). Societal influence, environmental impact, organisational culture and finance are the four key dimensions of sustainability, together a complete representation of stakeholders both in the present and in the future (Aras & Crowther, 2008: 437).

Several alternative governance frameworks emerged to suggest how the economic value of the company is balanced in integrated economic, social and environmental performance reporting (Ernst & Young; Deloitte & PricewaterhouseCoopers [PwC], 2009; Höver, 2004; Ulrich, 2008). For example, the World Commission of Environmental and Development's (WCED) global agenda, describe sustainability as a large consensus-building process (Byrne, Glover & Alrøe, 2005: 52). Becoming sustainable promotes risk mitigation and value creation for the firm (Korhonen & Seager, 2008; Seager, 2008; Welford, 1995).

The Dow Jones Sustainability Index definition of corporate sustainability explains it as a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments (Clarke & Branson, 2012). Byrne *et al.* (2005:52) explain sustainable development as finding synergy between globalisation and ecological modernisation, marrying economy and ecology through reforming economics, technologies and social institutions. A different definition by Crowther (2002) defines corporate sustainability as broadly the concern with the effect of present action upon available options in the future referring to the carrying capacity of the ecosystem and the input–output models of resource consumption. In similar fashion, Höver (2004: 8-9) argues that sustainability requires a distribution of effect – positive and negative – in such a way as to eliminate conflict between all of these and to pay attention to the future as well.

There are many different frameworks that corporate actors can choose from, or combine:

1] The Equator Principles (EP) in the financial sector primarily intend to provide a minimum standard for due diligence to support responsible risk decision-making. The EP principles cover over 70 percent of International Project Finance Debt (IPFD) in emerging markets. This represents an official adoption rate by 84 Equator Principles Financial Institutions (EFPIs) in 35 countries (The Equator Principles 2013).

2] The National Business Initiative (NBI) in South Africa is a not for profit organization acknowledged by government and other stakeholders as a credible partner. The NBI membership comprises of a voluntary group of leading South African and multinational companies working together towards sustainable growth and development in South Africa. Business and international partners consider the NBI's ability to inspire and mobilise business for collective and voluntary action as progressive in business leadership and action. The NBI is a regional partner of the World Business Council for Sustainable Development (WBCSD), and the focal point of the United Nations Global Compact (UNGC) in South Africa (National Business Initiative 1995).

3] The Social and Labour Plan (SLP), a by-product of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA), is a pre-requisite for the granting of mining and production rights in South Africa. The SLP provides guidelines for programs to ensure effective transformation in the mining and production industries by promoting social and economic welfare development (Revised Social and Labour Plan Guidelines 2010).

4] The Johannesburg Plan of Implementation (JPOI) was formulated to read with international agreements such as the Sustainable Development Goals (SDG). The JPOI strategy is a response for sustainable development in the Johannesburg Declaration on Sustainable Development (JDSD). The JDSD builds on declarations made at the United Nations Conference on Human Environment at Stockholm in 1972, and the Earth Summit in Rio de Janeiro in 1992. Adopted at the World Summit on Sustainable Development (WSSD), the declaration is an agreement to focus on "the worldwide conditions that pose severe threats to the sustainable development of our people" (Johannesburg Plan of Implementation Response [JPIR] strategy 2003).

5] The Sustainable Development Goals (SDG), also known as Global Goals, are described as a "universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity". The SDG goals build on the Millennium Development Goals (MDG), and include new areas such as climate change, economic inequality, innovation, and sustainable consumption as few of its priorities. (Sustainable Development Goals 2015).

Corporate actors may however be responsible without becoming sustainable (Bansal & Song, forthcoming). This is in part because their understanding of sustainability challenges is still being connected by a bias towards issues that directly and immediately affect one's operations.

The theory of stewardship (Aras & Crowther, 2008: 434, Antadze, Lin & Branzei, 2014; Crilly & Sloan, 2012: 1181) takes a wider view of governance issues relating to sustainability than the theory of stakeholders, without abandoning profit-maximisation as a priority corporate objective (Rossouw & Van Vuuren, 2004: 80). Governance approaches remain limited to the best interests of a company as a whole, taking the position that the board members are the stewards in the companies. They serve to ensure that there is good performance and forward thinking (Le Roux, 2010). Furthermore, board members anticipate economic success in return for their stewardship to reduce their social and environmental impact by improving their sustainability initiatives and practices through voluntary directed initiatives (Walls, Berrone & Phan, 2012).

The sustainability concepts are interlinked and associated with ongoing economic and technical activities, to frame and guide the constraints and new opportunities of social and economic development (Johnston, Everard, Santillo & Robèrt, 2007: 60-66). This implies changes in direction, moving away from the traditionally defined economic growth model associated with all of its vested interests to retain those interests in a healthy ecosystem.

Vested interests modify interpretations of the sustainability concept "to serve a variety of agendas that do not necessarily have the well-being of the planet's ecosystems or that of the people in the developing world or future generations at their core" (Johnston *et al.,* 2007: 61). For example, human well-being is beginning to guide definitions of sustainability (Johnston *et al.,* 2007: 60-66).

2.4 CORPORATE GOVERNANCE REVISITED

Corporate governance traditionally encompassed only those responsibilities influencing the direction, priorities and performance of corporations (Ehlers & Lazenby, 2004: 39; Loorbach, 2010: 166; Organisation for Economic Co-operation and Development (OECD) Principles of Corporate Governance, 1999; Pearce & Robinson, 1994; Rossouw & Van Vuuren, 2004).

The "good governance hypothesis" long held that acting responsibly, transparently and accountably to multiple stakeholders raises the confidence of investors because it guarantees firms' stability and consistency in the markets they serve (Aras & Crowther, 2008; Kocmenová, Hřebiček & Dočekalová, 2011; Le Roux, 2010). While some responsibilities may contain profit

maximisation (Rossouw & Van Vuuren, 2004), good governance helps organizations fit within the rules of the game.

Conversely, lapses in responsibility, demonstrated by corporate governance scandals from the Enron's fall from grace, and the financial crisis in 2008 to the Panama Papers upheaval earlier in 2016, revealed the inherent limits of the "good governance hypotheses" and called for going beyond business interest to restore the moral and ethical foundations of corporate governance (Tihanyi *et al.*, 2014; Walls *et al.,* 2012).

Furthermore, because business practices clearly have a big role to play in ensuring the sustainability of the earth (Holling, 2001), theories of corporate governance need to explicitly acknowledge their boundaries and transition from responsibility to sustainability (Bansal & Song, forthcoming). "Irresponsible" corporate behaviour or "wrongdoing" halts and hinders sustainable development goals widely agreed to be necessary for the survival of humankind. Continuing with business as usual threatens the sustainability of the whole earth and of all human enterprise on it (Biggs *et al.*, 2015; Chapin, Kofina & Folke, 2009; Domptail & Easdale, 2013). The spate of corporate scandals[3;4;5;6;7] accelerate the pace of ecological problems, putting in jeopardy the   functioning of critical eco-systems. We also need new models of sustainability that respect the carrying capacity of the planet and create economic value within planetary boundaries.

2.5 BOUNDARIES

Rockström *et al.* (2009) identified and quantified nine planetary boundaries within which humanity can continue to develop and thrive – on condition that we respect and manage these boundaries as safe operating spaces. They warned that the belief in unlimited growth stands in stark contrast with the notion of global sustainability, and it remains largely oblivious to the risk of "planetary scale human-induced environmental disasters" (Rockström   *et al.*,

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[3] The 2015 Volkswagen (VW) Dieselgate: The Environmental Protection Agency (EPA) announced recently that VW had installed a "defeat device" into its diesel vehicles, causing the cars to emit less nitrous oxide during testing, but it was found that the affected vehicles were emitting 40 times the EPA standard outside of testing, involving 11 million cars world-wide (Topham, Clarke, Scruton & Fidler, 2015).

[4] The 2015 FIFA scandal: South Africa allegedly paid the FIFA vice president US$10 million for his support for the 2010 bid, which South Africa won in a rigged bidding with Morocco (Hartley, 2015).

[5] Enron, one of the largest companies in America, collapsed and in the process became a lasting symbol of corporate governance failure (Oppel & Sorku, 2001).

[6] The 2016 Panama Papers scandal: Panamanian law firm, Mossack Fonseca, fronted as a secret tax haven for wealthy clients to hide wealth, launder money, dodge sanctions and avoid tax (Stack, Erlanger, Rousseau, Forsythe, MacFarquhar & Castle, 2016).

[7] It now appears that 300 to possibly 450 tons of contaminated water is flooding into the Pacific Ocean from the Fukushima Daichi site in Japan every day, destroying marine life, biodiversity and the Pacific Ocean food chain. (Hsu, 2013).

2009: 33), and the injustices they cause.

Crilly and Sloan (2012) and Kacperzyk (2009) note that corporate governance argument continue to link responsibility with growth but growth itself has come under scrutiny. In 1972, forecasts showed that the world population and economy were still comfortably within the planet's carrying capacity, but by 1992 we had already overshoot the planet's carrying capacity (Meadows *et al.,* 2004). The very scale and extent of economic activities undermine the capacity of nature to generate ecological services on which we depend for survival and on-going prosperity (Biggs *et al.,* 2015; Chakrabortty, 2016; Swilling & Annecke, 2012).

In a dynamic world with rapid and ever increasing needs however, market mechanisms prove to be less sufficient and the law less adequate to control irresponsible economic activities in a changing world (Folke *et al.,* 2002; Greig, Hulme & Turner*,* 2007; Ostrom, 2007a; Rockström *et al.*, 2009; Shrivastava, Ivanja & Persson, 2013; Swilling & Annecke, 2012: 25; Whiteman *et al.* 2013).

The concept of sustainability continues to be ruled by underlying assumptions of a Newtonian ontology (Capra & Luisi, 2014:19-60), modeled onto social systems and policies that rely on linear predictability and certainty. Corporate sustainability frameworks help specify the fine line between irresponsibility and responsibility but do not yet describe let alone model the range of corporate practices that can move us towards corporate sustainability. Corporate governance approaches need to be rethought in ways that honour the complexity of the commons they inhabit and use (Ostrom, 2007a; 2007b; 2009; 2010) so that the quest for sustainability becomes part and parcel of the fundamental objectives of corporate actors (Kolk, 2008: 3; Walls *et al.*, 2012).

2.6 TOWARDS CORPORATE SUSTAINABILITY

While notions and frameworks of responsibility have emphasized the disconnect between corporate actors and the socio-economic ecosystems they inhabit and depend on (Antadze, Lin & Branzei, 2014: 2), integrated reporting frameworks seek to embed corporate actions with local and global commons and make mutual linkages more evident. Integrated reporting shows:

1] the relationship between financial and non-financial matters;
2] how good performance on Environmental, Social and Governmental (ESG) issues contributes to good financial performance and vice versa; and
3] the potential trade-offs that a company might be facing across financial and non-financial performance (Eccles *et al.*, 2011).

The immediate objective of integrated reporting is to report to stakeholders on the strategy, performance and activities of the organisation, in a manner that enables the stakeholders to assess the ability of the organisation to create and sustain value over the short, medium and long term. The bigger goal is to foster appreciation within the organisation and among its stakeholders of the extent to which the organisation's ability to create and sustain value is based on the interlinked nature of the financial, social, economic and environmental systems and of the equality of its relationships with its stakeholders (Eccles & Krzus, 2010).

The key integrated reporting framework is The Global Reporting Initiative (GRI), which guides businesses, governments and other organisations to understand and communicate the impact of business on society and environment. GRI focuses on critical sustainability issues such as climate change, human rights, corruption among many other such considerations (Global Reporting Initiative 1997).

In South Africa, the GRI is complemented by the *King III Report* (King Code of Governance for South Africa, 2009) which addresses several additional local challenges.

2.7 KING III: A SOUTH AFRICAN PERSPECTIVE ON INTEGRATED REPORTING

South Africa is a unique and relevant issue for looking closely at corporate governance arrangements, because its officially sanctioned frameworks are amongst the most ambitious globally. South Africa was also the first country to introduce specific requirements for corporate governance (King Code of Governance for South Africa, 2009). For example, frameworks such as the UK Cadbury Report (Cadbury Committee, 1992) or the South African King III Report on Corporate Governance (King Code of Governance for South Africa, 2009) were designed to achieve specific outcomes and make explicit the stakeholder engagement processes companies ought to follow when they access resources. The King III Report (King Code of Governance for South Africa, 2009) has been cited as "the most effective summary of the best international practices in corporate governance" (cf. Banhegyi, 2007: 317).

The King III Report's predecessor, the King II Report (King Code of Governance for South Africa, 2002) underscored the interconnection between economic, social, and environmental issues. A crucial argument in place since its publication is the good governance argument: the expectation that long-term economic surplus hinges on pro-social and pro-environmental corporate governance. In complying with the King II Report requirements, companies had to report on sustainability separately from other factors,

misled by mixed interpretations of corporate social responsibility, and triple bottom line approaches. Mervin King considered the King II Report as wrong to include sustainability as a separate chapter. Many companies mistakenly reported on corporate responsibility as part of sustainability, which was viewed as a tick-box exercise (cf. Muller, 2011).

The subsequent King III Report (King Code of Governance for South Africa, 2009) is generally considered and accepted as a groundbreaking code for corporate governance reporting. The third King Draft Report was released on 25 February 2009 in anticipation of the new Companies Act (Company's Act 71 of 2008, as amended by the Companies Amendment Act 3 of 2011), and was a forerunner in the international governance movements. By mandate and design, the King III Report (King Code of Governance for South Africa, 5) emphasises the revolutionary nature of corporate governance.

The final report, released on 1 September 2009, suggested that governance of corporations could be built on a statutory basis, as a code of principles, or both. Of central importance was the strong argument against the "comply or else" framework as set out in the preceding version of the report (King Code of Governance for South Africa, 5). The underlying intention of the report was not to force companies to comply with recommended practice. A "one size fits all" approach was no longer regarded as logical or suitable.

Instead, the report encouraged each company to customise its corporate governance approach to the highest level of responsibility it could achieve given the scope and scale of its operations (King Code of Governance for South Africa: 5). Directors were ultimately held accountable for adherence to appropriate best practice principles, and the board of directors was charged with the design and adoption of adequate policies, the oversight of implementation of such policies, and the culture that would enable companies to adhere to such policies. Risk management was deemed an integral part of the company's strategic and business processes. The King III Report (King Code of Governance for South Africa, 2009) urges companies to institute measures and to ensure that they are able to manage the relationships with all their stakeholders proactively.

The company should encourage constructive stakeholder engagement and the board of directors should strive to achieve a correct balance between the interests of all its various stakeholder groupings and should promote mutual respect between the company and its stakeholders. The board of directors should ensure awareness of and compliance with laws, rules, codes and standards, and management need to be tasked with the implementation of an effective compliance framework and processes. King III also includes measures to align responsible practices with financial reporting (and prevent any conflicts).

The King III Report encourages collective decision-making but allows companies to either "apply or explain" their approach (King Code of Governance for South Africa, 2009: 5). As long as the board fulfils its legal duty to act in good faith, in honesty and in the best interest of the company, the board is free to dial social and environmental sustainability requirements up or down, depending on their economic performance objectives. While the three concepts of corporate, social and environmental sustainability remain intertwined, some have interpreted this as license to the board of directors to remain focused on performance – as long as they provide an integrated report (King Code of Governance for South Africa, 2009: 5).

The King III governance framework (King Code of Governance for South Africa, 5) focuses on compliance and material interests and not on responsibility, as it ought to be when we consider the complexities involved in corporate governance responsibilities. The main precept of the King III report is to focus on integrated performance as an inclusive approach (King Code of Governance for South Africa, 5). The code of corporate governance is not enforced through legislation. However, due to evolutions in South African law, many of the principles put forward in King II are now embodied as law in the Companies Act of South Africa (Company's Act 71 of 2008, as amended by: Companies Amendment Act 3 of 2011).

Compliance with the King Reports is a requirement for companies listed on the Johannesburg Stock Exchange (JSE). The report recommends that organisations should produce an integrated report in place of an annual financial report and a separate sustainability report. Furthermore, companies should create sustainability reports according to the Global Reporting Initiative's Sustainability Reporting Guidelines (cf. Muller, 2011). The King III Report applies to all entities, regardless of the manner and form of incorporation or establishment. It applies to all spheres of government equally as it does to companies.

Non-financial aspects fall under the umbrella of corporate social responsibility, and are typically sustainability initiatives, conservation benchmarks, data on diversity and minority leadership, environmental progress, social good, philanthropy, and pro bono efforts, to mention a few. Integrated reporting is also referred to as 'connected reporting' (Muller, 2011) with the ultimate aim to provide a single report telling stakeholders how the business of the organization reports on impacts on the environment and community within which it operates, and how the environment and community affect the business of the organisation.

In practice, however, governance frameworks such as espoused in the King III Report (King Code of Governance for South Africa, 2009) are only implemented partially and cautiously, and often subsumed as more traditional risk mitigation and management priorities. In stark

contrast to the richness of the officially mandated frameworks, particularly inside South African companies, sustainability practitioners face a top-down, often rigid, delegated and fragmented understanding of the world. Stakeholders are placed in boxes, and the sustainability function is reduced to an annual event taken care of by a single person, who 'manages' each box based on a predetermined norms and rules template that often prevents meaningful engagement.

The integrated report still has little effect on influencing the complex relationship of investment considerations and decisions, and the topic is not yet at the top of the agenda of most "mainstream" investors (Eccles & Serafeim, 2011: 81). Some prominent South African business leaders and chairs of internationally based South African conglomerates, have taken the lead to explain and not comply. It is debatable whether a business-as-usual approach to corporate governance inspires responsibility and healthy relationships with stakeholders from an influential position. South Africa cannot afford hypocritical corporate behaviour, and less so mixed signals by influential business leaders.[8] No universally accepted framework exists for integrated reporting; it is still largely a voluntary practice, and exactly what it means for a company to produce an "integrated report" is not well defined either (Eccles & Serafeim, 2011: 78).

Integrated reporting allows corporates to reconnect with their socio-economic eco-systems, but does not yet specify how more sustainable practices emerge and evolve (Williams, 2000: 113). The remaining chapters explain how I facilitated the transition of corporate actors in Stellenbosch from responsibility to sustainability (Bansal & Song, forthcoming), and the lessons I distilled by documenting the three stages they followed.

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[8] Examples of 'Explain and *not* Comply' (King Code of Governance for South Africa, 2009):
   a. Woolworths is amidst the South African Boycott Divestment and Sanctions campaign because of selling 'mislabeled' Israeli products.
   b. While known for its ties with the World Wide Fund For Nature (WWF) and sustainable fair trade, the South African National Roads Agency Limited (SANRAL) is accused of misinformation to force tollgates on the public who wonders on what the fuel tax is spent.
   c. Our presidency and parliament condone personal enrichment in terms of opulent lifestyles.
   d. ESKOM; and
   e. The South African Broadcasting Corporation (SABC) is bankrupt, yet reward executives with multi-million rand incentives, and the list continues.

CHAPTER 3

TOWARDS A COMPLEX SOCIAL-ECOLOGICAL APPROACH FOR GOVERNING CORPORATE SUSTAINABILITY

3.1 INTRODUCTION

In Chapter 2, it was argued that a narrow understanding of governance that only includes corporate governance in its definition is not appropriate to respond to current sustainability challenges. Chapter 3 aims to shift the focus of study to re-frame corporate governance in the broader context to be only one kind of framework that is present in the mix of governing relations when framed from a social-ecological systems (SES) approach. This chapter departs from the notion that 'governance' needs to be understood in its broadest sense to not only imply corporate governance or governmental governance. The scope of corporate governance is broadened (Tihanyi *et al.*, 2014: 1541) to situate corporate sustainability specifically in the embeddedness of corporates in social-ecological systems (SESs) that are complex. In this chapter, I furthermore provide a short overview of the notion of complexity and the main terms of social-ecological systems (SESs) as I use the notions of complexity and SES to justify the concept of embeddedness.

For the purpose of this dissertation, the notion of 'governance' will not be employed in an exclusive way, but rather to refer to describe the multitude of actors and processes that lead to collectively binding decisions (Van Asselt & Van Bree, 2011). It is argued that governance of the commons includes a variety of actors including the government but does not presume any changes in what the governance of the commons is. Governance systems should be interpreted to include all the mechanisms and frameworks or processes of interaction and decision-making in any form of organisation, whether it is a corporate, geopolitical (nation state), socio-political or an informal entity (Biggs, Westley & Carpenter, 2010). Corporate governance is only one 'arm' in the various aspects of governance and the diversity of stakeholders who contribute to achieving sustainability goals in a country or particular area or initiative. Although a place-based perspective is often present and may be conducive to cross-sector collaboration and innovation, it is neither always nor automatically linked to the kind of transformative governance documented in this study.

Drawing from the field of social-ecological systems (SES) thinking (Berkes & Folke, 1998; Holling, 2001; Gunderson & Holling, 2002), the notion of governance should be expanded to include the interlinked social and ecological relations that mark the current sustainability challenges. As a result, governance frameworks that respond to sustainability challenges only from a corporate or only a governmental perspective will have limited outcomes and similarly, governing responses that only take environmental issues seriously are insufficient (Biggs, Biggs, Dakos, Scholes & Schoon, 2011; Folke *et al.*, 2011; Rogers *et al.*, 2013).

Moreover, in this dissertation it will be argued that by framing the problem of the commons in terms of a SES approach, the notion of governance needs to be enlarged to include the complex and often conflicted stakeholder relations that are linked to the commons, highlighting why the shift from firm-centric to stakeholder centric governance approaches are necessary. From this perspective, the stakeholders would then include entities from the corporate world, government, non-profit organisations and civil society, for example.

Hence, this chapter will focus on the challenges for governing stakeholder relations in social-ecological system contexts that requires a shift from corporate governance frameworks to more collaborative stakeholder governance arrangements. This can only be justified when framing the problem of governing the commons from a SES perspective that views the notion of sustainability from a complex adaptive systems (CAS) approach. Complexity and SESs are not being used as concepts in this study, but rather serve as lenses to make sense of the linked dynamics between social and natural systems.

By considering the complex reality in which governance frameworks are to guide stakeholder relations towards more sustainable SES-futures, I review the SES governance framework developed by Ostrom (2009; 2010) who offers and coined the notion of polycentric governance systems; suggesting that cooperation is a more sustainable governance approach for governing the commons. I then offer a critical analysis of the polycentric governance framework by arguing that it is most effective to govern collective action of stakeholders that operate in homogenous settings.

I proceed by arguing that in settings where the stakeholders have not yet been adequately identified and connected or organised into legitimate institutions, bottom-up, cross-sector, multi-stakeholder collaborative governance frameworks present more appropriate responses for governing the commons. I conclude by arguing that flexible, transformative collaborative governance frameworks that emerge from a process of facilitation and mediation, is more appropriate to guide and develop the SES stakeholder relations.

3.2   RE-CONNECTING GOVERNANCE FRAMEWORKS TO THE BIOSPHERE: A SOCIAL-ECOLOGICAL SYSTEMS APPROACH

The messy state of the world is substantiated by Pope Francis's recent encyclical, as he begs for sustainable and integral development processes (Francis, 2015:12). He could not put it any clearer: if it is wrong to wreck the planet, then it is wrong to profit from that wreckage. We are overextending the earth's capacities, and need to act collectively to move back into sustainable territory (Meadows *et al.*, 2004). "What is at stake is nothing less than a 'reappraisal of the relationship between humanity and nature" (Yardley & Goodstein, 2015). By holding decision-makers more accountable, governance approaches could be re-imagined, and they should draw on a richer definition of sustainability to be understood as being linked to biosphere stewardship practices (Folke *et al.*, 2011).

By re-framing the notion of sustainability in terms of a planetary stewardship context (Folke *et al.*,2011: 720) argue that traditional governance responses disconnect "human progress and economic growth from the biosphere and the life-supporting environment, if not simply ignored, has become external to society with people and nature treated as two separate entities". Our governance approaches need to be able to deal with complexity and wicked problems. Traditional strategies that assume predictability of risk analysis, and certainty of controlling strategies, fail to address the open and contextual nature of organisations and stakeholder relationships. Social-ecological systems SES thinking offers a way to reframe this position.

By positioning the study in the broader quest to answer wicked problems in particular, emphasises the commons that is/are socially constructed (Ansari et al., 2013) to tackle so-called wicked problems (or questions) in definite SESs. However, before I continue to explain the SES approach, it is important to clarify that corporate governance frameworks are neither critical nor central to the insights drawn from the study.

Corporate governance frameworks are considered as mere fixtures of a given place and time which get periodically challenges and updated. Frameworks are simply general terms/phrases that refer to the systems and strategies by which corporates are governed – which are not essentially top-down or bottom-up in nature, but can be designed and implemented in either (or a combination) of ways. The frameworks in place at the time of the intervention were the responsibility of boards; the boards decided whether, when and how rigorously to comply with the recommendations. The top-down approach is therefore simply a by-product of who is in charge of compliance.

At any time-place combinations, corporate actors triangulate their governance decisions with the frameworks in place. They can certainly violate or exceed the responsibilities

recommended by these frameworks. However, the frameworks serve as knowledge templates: firms can compare and contrast their wrongdoing and right doing, not with peers only, but also relative to these frameworks. Whether or not, and how stringently firms adhere to these frameworks, is not a concern of this thesis.

For this study, SES is situated within the broader framework of complex adaptive systems (CAS) studies, seeing that the basic assumption underlying the SES approach is that human-nature relations are interlinked, complex relations that can be recognised and navigated in terms of the characteristics of such CAS.

3.3   RE-CONNECTING WITH COMPLEXITY

The complexities of our reality are overwhelming. Our governance and sense-making mechanisms are designed to simplify, control and limit our capability and to process the information that does not fit our view of the world. We remain stuck with rules that do not fit with the richer patterns of interaction between society and the environment (Cilliers, 1998). He argues that "[n]o single method will yield the whole truth"; we have to open ourselves to "different avenues of advance, different viewpoints" for better understanding (1998: 23).

Complexity is increasingly defined in terms of dynamic systems, interlinked with the earth's life-sustaining ecosystems. The multiple patterns and dynamic interactions of multiple elements engage in self-organisation processes that make up our world, and inform our world perspectives (Wells, 2012). Although solutions to complex challenges will involve action across multiple, overlapping scales, integration across scales of governance and prioritising of issues will be problematic, if a shared understanding of the complex challenges is not possible (Wells, 2012).

The sources of complexity are unexpected. Unpredictable patterns of behaviour, and outcomes emerging from the dynamic interactions of interlinked political, economic and environmental systems, bring about changes and risks for human well-being and sustainability (Anderies *et al*., 2004; Fischer *et al*., 2015; Galaz *et al*., 2012; Liu *et al*., 2007; Steffen *et al*., 2013; Whiteman *et al*., 2013). Human action can limit and exhaust ecosystems or transform these systems into more or less desirable conditions, strengthening or threatening our sustainable future. By nature, the intersectional and interrelated cause–effect relationships are unstable and uncertain and no particular interventions can predict exact outcomes, as they trigger non-linear abrupt changes in the environment on a global scale (Biggs *et al*., 2015; Folke *et al*., 2002). Causes, simple at times, are always multiple, non- linear in nature, cross-

scale in time and in space, where emerging patterns have an evolutionary character (Liu *et al.*, 2007).

Arguing against a reductionist understanding of the commons and sustainability (Burns, Audouin & Weaver, 2006; Audouin *et al.* 2013) suggest that sustainability is an emergent systems property, resulting from an entire web of relationships, connections and dynamic interactions. By linking the capacity of the ecosystem to benefit societal development, and its structures and frameworks, human society can be viewed to be part of the biosphere, embedded in ecological systems and obtaining benefits and important cultural and spiritual meaning from its interaction with nature and the ecosystems (Folke *et al.*, 2011; Steffen *et al.*, 2011).

This biosphere-based understanding of sustainability informs a post-reductionist perspective (Audouin *et al.*, 2013) and advocates that the process of sustaining life on earth to ensure human well-being, requires a reconsideration of the ecological and systemic foundations of sustainable development (Folke, 2006; Whiteman *et al.*, 2013). Audouin observes, "(s)ustainability is as much a value, as it is a scientific analysis about whether the environment will be degraded" as a result of economic development strategies (2009: 1). She contends that even though the rhetoric about sustainability pivots around biophysical, social and ecological issues, not even environmental practitioners and scientists themselves, share the same understanding of what sustainability means. We do not engage deeply enough with value systems. Capra and Luisi (2014: 352) agree that "the environment is no longer one of the many "single issues", […] [i]t is the context of everything else – our lives, our businesses, our politics".

With the biosphere as the context of everything else, human action and social structures are integrally dependent on how we govern the use and effects of our production practices of natural resources (Folke *et al.*, 2002; Adger, 2006; Capra & Luisi, 2014). The interconnectedness of global, social, economic, and ecological systems requires integrated governance frameworks that account for the multiple inter-linkages and dependencies between social and ecological systems (Chapin *et al.*, 2009; Biggs *et al.*, 2015).

When applying the characteristics of complex systems to governance approaches, we see that control strategies are inappropriate ways of engaging with complexity. Adequate governance approaches should provide mechanisms to navigate the emergent, adaptive and non-linear nature of complex phenomena in social-ecological systems. Wells (2012) observes that, although complexity thinking informs us about interconnectivity, interactions, emergence and self-organisation of systems, we need to inquire how the acknowledgement of complexity

can inform knowledge, understanding and perspectives on subjects such as ethics, politics and economics in the context of sustainability. "Complexity – including studies of feedbacks, networks, and hierarchies – has a lot to inform us about the nature of simplifications and ideologies in a world of crisis" (Wells, 2012: 86).

Furthermore, there is also a difference between what is understood as complicated and complex systems. Cilliers (1998) explains it is difficult to distinguish between a systematic (or a simple or a complicated) system and a complex system. Complexity is the result of the dynamic interaction between the components of the system, and is manifested at the level of the system itself. A system is framed at the level where it operates, paying attention to the elements of that system, and the interaction between them. As Poli (2013) argues, complex systems comprise of a different type of system from complicated systems, and cannot be explained in terms of being just a staggering of complicatedness. The nature of complexity implicates that we will never have complete knowledge to predict and control situations (Cilliers, 1998).

The word 'complexus' indicates that the breaking up of knowledge prevents us from linking and contextualising, a characteristic of disciplinary research that isolates objects from each other and from their environment (Morin, 2008). At the same time, these interconnected systems are changing at a rapid pace, and often in entirely novel ways. Governance and management strategies must be robust to deal with the uncertainty and unpredictability of system dynamics, to deal how they might change in the future. New and expanded frameworks and approaches are necessary to deal with these challenges, and to inform SES governance frameworks (Biggs *et al.*, 2015).

3.4   SOCIAL-ECOLOGICAL SYSTEMS: LINKED HUMAN-NATURE COMPLEX ADAPTIVE SYSTEMS

The term 'social-ecological systems' (SES) was coined to emphasise the integrated complex interaction between humans and nature (Berkes & Folke, 1998). It is difficult to manage the interacting aspects of SES through linear analytical approaches (Ludwig, Mangel & Haddad, 2001; Ritchey, 2008; Rittel & Webber, 1973). The complex nature of SES is well recognised (Audouin *et al.*, 2013), as the relationship between humans and nature does not translate into components of a system.

SESs are not social systems and ecological systems (Norberg & Cumming 2008), but can be defined as the emergent, integrated and linked social-ecological systems that are affected by one or more dynamics of interaction (Anderies *et al.*, 2004). Ecological and social systems are

complex, inter-connected, non-linear and unpredictable entities that cannot be understood from a single perspective or discipline (Liu *et al.*, 2007; Holling, 2001). Ecological, economic or social disciplines are contextual, they cannot be abstracted from their historical, social, and political or landscape contexts Chapman (2013). Refer to Figure 1 following.
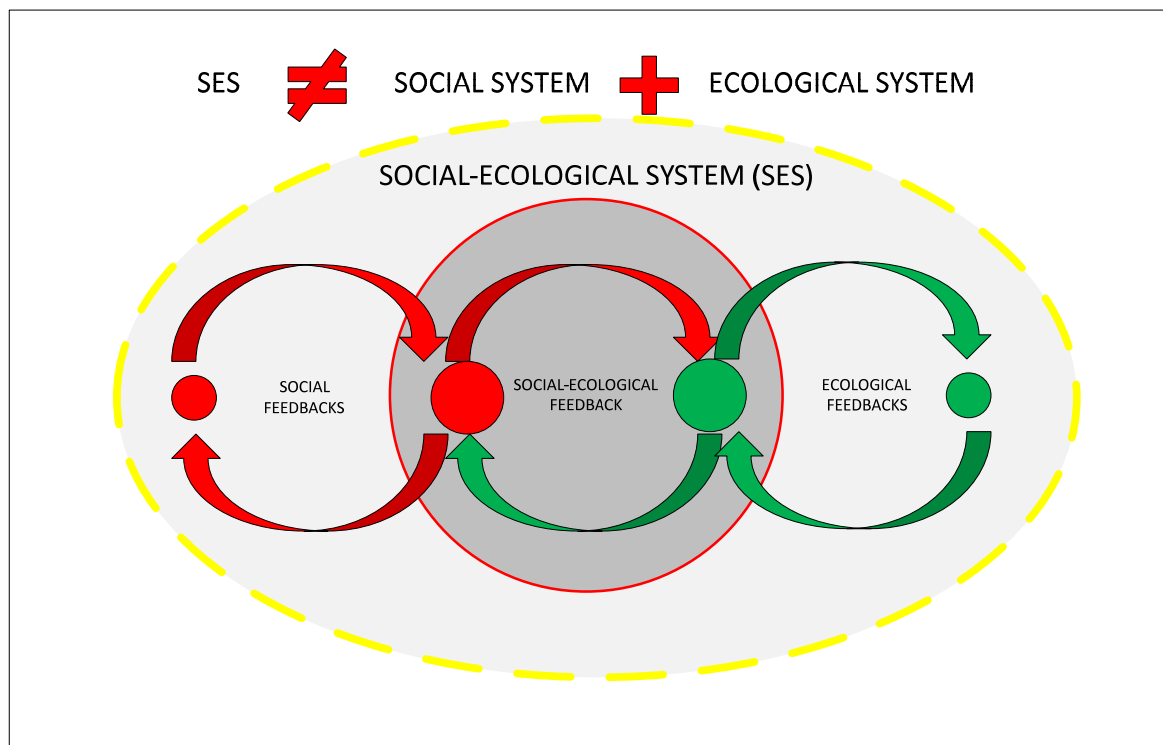
Figure 1 - SES are not social and ecological systems, but linked human-nature systems
Source: Biggs, R., Schlüter, M. & Schoon, M.L. (eds.). 2015.

Audouin *et al.* (2013) explain that the study of SES is often motivated by the uncertainty that results from non-linear interaction. In SES, the uncertainty associated with the unpredictable properties of coupled dynamics is made difficult by the multiplicity and non-linearity of processes operating over various spatial and temporal scales (Dearing *et al.,* 2010). We have to learn to live with uncertainty and disorder, and how to turn uncertainty into opportunities for creativity (Montuori, 2013; Poli, 2013). However, more importantly, we need alternative governance approaches that can cope with the adaptive and non-linear nature of complex SES interactions. The process of learning to manage for emergencies becomes a challenge in the face of all the crises mentioned above. Matching governance models with different types of processes of complex change becomes even more central to the governance research agenda (Duit *et al.*,, 2010; Biggs *et al.*, 2015).

In the following section, I review a current SES response that provides a governing framework for the stakeholder relations that mark the interactions in the SES space. Ostrom's notion of

polycentric systems governance (Ostrom *et* al., 1999;Ostrom 2009; 2010) will be the discussed briefly.

3.5 POLYCENTRIC SYSTEMS GOVERNANCE AS A MORE INTEGRATED FRAMEWORK TO APPROACH THE COMMONS

Ostrom (Ostrom *et* al.,1999, Ostrom 2009; 2010) did not support assumptions and theoretical predictions that strict top-down government regulation or privatisation of a resource is the only way to ensure sustainable use of shared resources to overcome the tragedy of the commons. Challenging mainstream theory has developed from Hardin's manifesto (1968) on environmental and nature conservation policy (Kennedy, 2003). Drawing on empirical studies of sustainable resources over time, Ostrom and colleagues (Anderies & Janssen, 2012; Ostrom *et al.*, 1999; Ostrom 2009; 2010) reassessed the generality of the theory that developed from Hardin's arguments around how to govern the commons (Ostrom *et al.*, 1999), and could prove that the two competing traditions to manage or eliminate access to commons, are not the only means to deal with our commons dilemma.

Both approaches require costly structures to manage or restrict access to the commons. Ostrom questions the feasibility of centrally imposed taxes or quotas, as central authorities do not understand the local situation, and the participants have no incentive to reveal information that is needed to achieve efficiency (Ostrom *et al.*, 1999). Ostrom argues that the actual commons problems are usually far more complex than the models economists use to write down costs or losses (Ostrom *et* al., 1999; Ostrom 2009; 2010; Ostrom & Cox, 2010; McGinnis & Walker, 2010).

Ostrom (Ostrom *et* al 1999, Ostrom 2009, 2010) proposes the study of the commons as a third option to central and private control, in order to deal with externalities of inefficiencies that arise from commons access problems. She argues that every real-world commons has its own peculiarities, and that central authorities often fail to deal with commons problems efficiently. Evidence from her research proved there are additional solutions to deal with externalities of inefficiency regarding the commons (Anderies & Janssen, 2012), and that self-organising solutions to commons problems are possible. The concept of polycentric systems was developed for the analysis of problems involved in the provision of diverse public goods and services (Ostrom *et al.*, 1999; Ostrom, 2009; 2010; Ostrom & Cox, 2010; McGinnis & Walker, 2010).

Polycentric systems comprise the bringing together of many centres of decision-making (multiple governing authorities at differing scales), that are formally independent of each other,

but involved in competitive relationships or connected to each other in cooperative undertakings, or which have recourse to central mechanisms to resolve conflicts, functioning as a system (Ostrom *et al.*, 1999; Ostrom, 2009; 2010; Ostrom & Cox, 2010). Each unit for example, exercises considerable independence to make norms and rules within a specific domain (such as a family, a firm, a local government, a network of local governments, a state or province, a region, a national government, or an international regime). Users often devise long-term, sustainable institutions for governing these resources, as people have self-organised to manage common-pool resources for thousands of years (Ostrom *et al.*, 1999).

Ostrom (2010) argues that no governance system is perfect, but polycentric systems have considerable advantages given their mechanisms for mutual monitoring, learning, and adaptation of better strategies over time. She states:

> Polycentric systems tend to enhance innovation, learning, adaptation, trustworthiness, levels of cooperation of participants, and achievement of more effective, equitable, and sustainable outcomes at multiple scales, even though no institutional arrangement can totally eliminate opportunism with respect to the provision and production of collective goods (Ostrom, 2010: 552).

Ostrom mentions that studies of water industry performance in California, during the 1960s provided substantial evidence that multiple public and private agencies had sought productive ways of organising water resources at multiple scales. The presence of multiple government units without a clear hierarchy was not chaotic (Ostrom, 2010). She comments (2010: 552) as follows:

> "[a]n important lesson is that simply recommending a single governance unit to solve global collective action problems – because of global impacts – needs to be seriously rethought". Likewise, Whiteman *et al.* (2013:310) emphasise that "[c]orporate sustainability activities simply do not contain 'mechanisms to ensure that human impacts on the environment, in aggregate, are reduced to some acceptable and 'sustainable level'."

Unfortunately, polycentric governance systems, levelled at micro-situational contexts, sometimes lead to improved performance of SES, and others lead to failures (Ostrom, 2009). Ostrom (2009) found that relationships among multiple levels and different spatial and temporal scales, determine whether SES are sustainable or unsustainable (Ostrom *et al.*, 1999; Ostrom, 2009; 2010; Ostrom & Cox, 2010). Moreover, she (2007) criticises blueprint approaches to tough social-ecological problems as misguided efforts in governing sustainability, and supports Korten (1980) and Walters (1986; 1997) in their views that

governance approaches need to embrace complexity (Axelrod & Cohen, 2001) to adopt a learning process for solutions.

Our challenge is to avoid adopting standardised blueprint solutions, to search for appropriate types of solutions for specific niches, and to help to adapt these to particular situations (Ostrom, 2007). However, Ostrom (2007: 3) believes that "[t]here are situations where some form of government ownership, privatization, decentralization, land reform, or community control of resources is an appropriate solution to a particular social-ecological problem".

The preference for simple solutions to complex problems remains strong even with a history of this challenge (Epstein, 1997). "Policymakers, decision-makers and scholars are stuck in the hope and belief that the same 'solutions' always work. History warns against generating conflict of interests, due to a lack of sensitivity to context-specific issues and history. Some governance systems lead to improved performance of SESs and others lead to failures" (Ostrom, 2007: 3).

Calling attention to the inadequacies of the panaceas that are prescribed as simple solutions to complex SES is insufficient. Considering the extent of worsening ecological conditions as a result of increased human activities, call for diverse institutions to enhance learning and innovation. This needs to happen over multiple scales, with a range of governance approaches that comprise diverse ways of improving the possibilities of sustainable SESs growing stronger (Ostrom, 2007: 1).

3.6   TOWARDS A TRANSFORMATIVE COLLABORATIVE GOVERNANCE FRAMEWORK FOR SES STAKEHOLDER RELATIONS

Whilst Ostrom and colleagues argue for collective action, I find they are largely silent on how multiple stakeholders will work together in the SES space (personal observation based on TD research – see Chapter 6). It is clear that ttraditional governance orients organizations towards transactional exchanges – and that a shift of attention towards stakeholders is both desirable and feasible (Kacperczyk, 2009). Although there is no expectation that governance within the corporation could or should extend or apply to stakeholder relations, we also know that corporate actors are involved in convening and socially constructing the commons. But what we do not know yet, however, is why some corporate actors transition from their traditional approaches to these transformative roles (for themselves and others, becoming stewards of commons instead of just exploiting them).   We do know, however, that

interactions around different commons are likely to shift the focus of attention, e.g. to non-financial outcomes, from the short-term to the long-term.

Corporate governance frameworks are institutions that constrain and guide what corporate actors do. They do not predetermine, however, the actions that corporate actors could take. As corporate actors take responsibility for additional commons for example, industries and fields are reconfigured and the social, cultural and moral norms get upgraded (Schüssler, Rüling & Wittneben, 2014). The focus of the dissertation is not on the commons themselves or the role of specific corporate actors within commons, but rather explaining how the commons corporate actors inhabit may enable their progressive transformation from self-centred to societally- or environmentally-centred actors (Stephan, Patterson, Kelly & Mair, 2016). Further frameworks themselves are periodically challenged and revised. The focus of the dissertation is not on the commons themselves or the role of specific corporate actors within commons, but rather explaining how the commons corporate actors inhabit may enable their progressive transformation from self-centred to societally- or environmentally-centred actors (Stephan *et al.*, 2016). We have also come to expect that both the problem and the solution condition this transition (Ansari, Wijen & Gray, 2013) and even bold cross-sector collaborations rarely modify both. We do not yet know whether, let alone how, the place itself influences this transition, and to our best knowledge, this is the first study to reveal how a natural object – the river – intermediates the transition of corporate actors from traditional to transformative governance.

Collective action for governing the commons as complex SES implicates involving a wide and diverse stakeholder group, in a unique setting, with its own context and realities stretching beyond immediate temporal and spatial boundaries. Context is determined by participatory realities in specific settings. We participate in what we look at, and what we look at is affected. Our focus delimits the boundaries, and attempts to control situations, depend on such boundaries. Systems appear different, depending on the aggregated level of interaction being used. We deal with different sectors, interests, systems and governance systems when we cooperate to act collectively in a hybrid approach, "recruiting the distinctive strengths of multiple partners, and the creative potential of their differing respective purposes" and perspectives (Bitzer & Hamann, 2015: 151).

Ostrom (2009; 2010) argues that successful collective action proves to be effective in close-knit homogenous communities, which are dependent on small-scale natural resources, but that the stakes rise with larger and more diverse communities, especially in urban areas. Transaction costs are usually prohibitive and cannot be overcome in situations dealing with

large-scale commons problems, which require a large number of dispersed individuals, to engage in actions to effect small or modest changes (Ostrom, 2009; 2010).

Foster (2011) explains that government support can reduce the costs of cooperation and help the actors to achieve high economic and social payoffs for their collective action by providing the necessary regulatory mechanisms and support to stabilise communities. She also acknowledges that, when regulations fail the community or when government authorities are either unable or unwilling to support the private actors and communities to work together, private actors are limited in their actions. Polycentric systems (Ostrom, 2009; 2010) are proposed to bring together multiple governing authorities at different scales, to function as a system, combining central governance mechanisms. However, this framework works well when facilitating homogenous stakeholder communities, as it is a formalised process of engagement, rather than a bottom-up approach to mediate and take collective action.

The emergence of local collaboration to preserve commons has been accepted for some time (Ostrom, 2009), such local collaborations rarely involve heterogeneous, cross-sector actors, whose motivations, activities and timeframes tend to differ dramatically. While the possibility of cross-sector collaborations among such diverse actors has been documented for different commons, from climate change to health issues, we have yet to appreciate how place creates additional occasions for such collaborations.

In developing contexts such as South Africa however, it is difficult to mediate coordinated partnerships across sectors without conflict, due to historic and regulated inequalities and because often stakeholder relations have not been formalised. In this section, I argue that governance approaches that employ collective action as a bottom-up approach, which allows for social learning to connect the community, works best when facing complex social-ecological problems and when aiming to collaborate towards relational repair and sustainability. I argue for what I call a transformative collaborative governance framework.

There is a vast volume of literature on the governance of the commons, but for the most part this dissertation elaborates one specific insight – examining the role of natural objects (in this case the river) and how it intermediates between a firm-centric, traditional governance mode (containment) and a stakeholder-centric, transformational governance mode (connection). The upfront problem statement focuses on the transition of corporate actors, not the management of the commons.

The key distinction/contrast between traditional-transactional and transformative anchors the research statement with the focus on the transition between the two terms and specifically the role of place in enabling this transition to overcome the failures of

traditional governance approaches for addressing wicked problems through the complexity lens (see appendix 3 on page 179 on the characteristics of complexity). While this transition, and in particular the role of place in the mediation thereof, enriches research on the governance of commons. the contribution rather stems from reclaiming and elaborating how place itself 'participates' in the process of governance by shifting actors' attentions and actions..

While the issue being addressed here is a wicked problem, one that eventually gets tackled through cross-sector interactions, the thesis does not dwell on the 'strategies' or even approaches of any single actor. Rather the interest in how actors (from different sectors) transcend their own (sector, time and place specific governance framework); then related on their own terms to the ecosystem (and the focal natural object, the river); and finally rethink the commons itself and the roles they play with and relative to other actors within this reconstructed commons. Some actors may have sustainability goals and file some of their actions under that rubric for reporting purposes: what gets captured in the data and the model, is emergent rather than planned behaviour.

This dissertation specifically suggests that place specifically and commons more generally are not passive social constructions but interactive objects that create the occasions for social construction in the first place and also encourage actors engaging in this social construction to reflectively and progressively transform their own frames, motives and activities to work more collaboratively with others being embedded in, and influenced by, the shared socio-ecological ecosystem. The three concepts describe how actors relate to the place – but the meaning of the place changes radically as actors transition among the stages by showing how place intermediates the transition of corporate actors from traditional to transformative governance, this dissertation builds a new and timely bridge between the literatures on commons and on cross-sector interactions that facilitate social innovations.

3.7   CONCLUSION

The messy state of the world requires a re-framing of the notion of sustainability in terms of reconnecting governance frameworks to the biosphere in a planetary stewardship context. In this chapter, I have explored the SESs approach to govern stakeholder relations in settings where stakeholders are not adequately identified and connected to or organised into legitimate institutions. The complex nature of SESs introduce the notion of managing interacting aspects in the human-nature relationships that cannot be understood from a single perspective or discipline.

Contesting the top-down competing traditions to manage or eliminate access to shared use of the commons, Ostrom proposed a third approach to central and private control. Polycentric systems have considerable advantages by bringing together many centres of decision-making (multiple governing authorities at differing scales). Calling attention to the inadequacies of the panaceas that are prescribed as simple solutions to complex SES is not enough, it calls for diverse institutions to enhance learning and innovation over multiple scales, and a range of governance approaches for diverse ways of improving the possibilities of sustainable SESs.

However, based on TD research I observed that this understanding for collective action does not explain how stakeholders will work together. Collective action is effective in close-knit homogenous small-scale communities, but not when the stakes rise in larger and more diverse communities, and often also not in developing contexts where it is difficult to mediate cooperative partnerships. I argue that framing SES governance approaches to employ collective action as a bottom-up approach. This will allow for collaborative social learning to connect the community when facing SES problems in contexts where stakeholder relations are in need of repair, before they can engage in collective action.

In Chapter 4, I will describe how I framed this problem as an exploratory stakeholder driven transdisciplinary (TD) research approach. I explain how I assembled a Participatory Action Research (PAR) process with the relevant research tools to access the Stellenbosch Eerste River Catchment (ERC) context to engage the stakeholders in my study. My methods and processes of engagement transformative collaborative governance framework for SES stakeholder relations I approached my study from a transdisciplinary research orientation to explore the possibility for a stakeholder driven governance framework. This research will build on transformative collaboration and social learning framed in a SES in Stellenbosch, South Africa.

CHAPTER 4

THE TRANSDISCIPLINARY RESEARCH JOURNEY: METHODS AND PROCESSES OF ENGAGEMENT

4.1 INTRODUCTION

The goal of this research was to develop a place-based response for corporates to expand their strategies for governing their interaction with the environment. The aim of this chapter is to offer a preparatory lens for the governance intervention that emerged during my transdisciplinary (TD) case study in Stellenbosch, which involved setting up partnerships to solve intractable situations, especially in unfavourable and overtly adverse and uncertain situations. I discuss how I approached my research process to develop the cross-sectoral collaborative governance framework, which will be discussed in Chapter 5.

Choosing a transdisciplinary approach to frame the problem, I explain how I immersed myself in the Stellenbosch context, adopting different roles to address issues around pollution of the Eerste River Catchment (ERC). I describe the research process I used to study the corporate perspectives of collective action for sustainability and to co-develop a collaborative governance response with the relevant stakeholders across sectors.

The focus on the governance relations between stakeholders affected by the pollution of the Eerste River, is a combined focus on stakeholder responses to the problem of pollution, which hoped to investigate the theoretical need for a more stakeholder driven approach to governance.

I justify an auto-ethnographic approach to support my role as the primary research instrument. After conducting a qualitative research study, I demonstrate how I had to adapt my role as researcher to the multiple layers of understanding that emerged in this space. I introduce a recently developed framework to assess resilience and report on how I explored how I could use it to describe my process and the methods used during the actual research phase.

4.2   TRANSDISCIPLINARY RESEARCH DESIGN: TD PLACE-BASED CASE STUDY

In the study on which this dissertation reports, I employed a transdisciplinary methodological approach[9] (see Appendix 1, page 171) as the primary tool for understanding the complex relationships that characterise the governing strategies of the social-ecological system of the Eerste River Catchment area (ERC) in Stellenbosch.

In my search for a research topic on sustainability challenges in Stellenbosch, it became clear that corporates were not actively participating in public and civil economic infrastructure development forums[10] in Stellenbosch. A key motivation for this study was to investigate how corporates could engage with multiple stakeholders to co-develop economic development strategies for sustainability in Stellenbosch.

Since 2012, I have witnessed how conflict marked the relationships between stakeholders with interests in the Eerste River catchment area. Initially, I thought that if the stakeholders could self-organise and agree about the rules to coordinate actions so as to take collective action (as suggested by Ostrom's polycentric systems discussed in Chapter 3), this conflict would be resolved.

However, the relationships within the community, and between the community and the local government agency, have long been problematic. Key conflicts in water management are mostly caused by overlapping mandates, party politics and conflicts between the national (ANC) government and provincial (DA) government. The involvement of many different role-players with different agendas and interests further complicated relationships. Efforts by community-based organisations, non-profit organisations and pressure from the national and provincial government agencies to solve the problem and address the causes and effect of pollution, had become a fragmenting competitive space.

Repeated interpersonal friction, relationship fractures and failed action attempts kept aggravating the already deeply rooted social, historical and cultural inequalities. Frustration with the Municipality's limited ability to deal effectively with the causes and effect of pollution in the ERC has built up over many years. The result was a set of negative feedback loops that escalated to public conflict in local and national media, and eventually recourse to legal

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[9] Pohl and Hirsch Hadorn (2007) outline the following typical phases in the TD research process: problem identification and structuring, problem analysis and bringing results to fruition. The first phase of 'joint problem definition' is a particularly important characteristic of TD research.

[10] The Stellenbosch Infrastructure Task Team (SITT), Rector-Executive Mayor Forum (REMF) and Infrastructure Innovation Committee (IIC).

prosecution of the Municipality for mismanagement. The multiple expectations and perspectives made it impossible to find an obvious answer to this messy problem emerging from the complex mix of related issues.

Because of the complex and conflicted nature of the real-world problem that I chose to study, I decided that the only way to assess and observe the multiple-stakeholder engagement in the ERC was to use a TD research approach. This allowed me to intervene in such a way that I could introduce a governance approach that emerged from a bottom-up process of participation between the multiple stakeholders across sectors. The reason for this arose from the dispute over the concrete nature of the problem. There was a great deal at stake for those involved in dealing with water management issues in the ERC area.

After many discussions with several stakeholders and participative observations in the above forums, I was lead to Distell who is a key corporate role player in the Stellenbosch region. It became clear that participation in sustainable infrastructure strategies was inhibited due to strained relations between Distell and the local municipality, and based on budget constraints to manage watershed issues.

I formulated my problem statement to investigate how corporate actors extend their governance approaches to shift from being self-centred (firm-centric) to transformative collaborative governance approaches in the commons to allow for a more stakeholder-centric approach. Thus, my exploration started with **Research Question 1**: how do corporate actors shift from traditional to transformative governance approaches?

I used a combination of auto-ethnography and participatory action research (PAR) to reveal how corporate actors engage and work with a variety of stakeholders and public and private partnerships at different levels of analysis to make and sustain shared commitments to an endangered commons.

4.2.1 Locating the empirical base: a place-based study of relationships affected by the polluted Eerste River

While the focus of study for this research project was the Eerste River catchment area (ERC) in Stellenbosch in general, I started out directing my research focus specifically at the relationships between the stakeholders affected by the pollution of the Eerste River.

When I started the study, the stakeholder base was not clearly defined, and neither was the problem at hand well demarcated. After preliminary discussions with keystone actors about the area I realised that I needed to frame the research process as a TD place-based study

(Potchin & Haines-Young, 2013). This unlocked **Research Question 2**: **What role does place play to adjust the governance approaches in the commons?** This insight allowed me the flexibility and adaptability of guiding the research process in such a manner that it would mirror the uniqueness of the context.

The translation of a problem from its meaning in an everyday context into scientifically valid research questions, means defining the goals of research in such a way that their contribution to practical solutions of a societal problem would be narrow enough to be useful. I entered the site due to the phenomenon – the pollution. However, the problem itself was (re)construed throughout the three stages of interaction, as was the solution. The framing of the thesis is theoretical – that is, given phenomena like this (often called wicked problems), traditional self-centric governance approaches are insufficient, but we do not know much about why or how actors might willingly transition to collaborative approaches. Furthermore, we do not know much about the role of place – the socio-ecological ecosystem or some of the focal natural objects within in – thus the follow-up question zooms into the role of place in enabling the transition from traditional to transformative governance.This process of defining research goals useful for everyday life calls for the examination of the structures considered essential.

This approach dictates that the research process is organised as a common learning process involving the researcher and the stakeholders alike, a process that proceeds reflexively (Pohl & Hadorn, 2008). The active participation of all parties can transcend and integrate disciplinary paradigms in search of a unity of knowledge beyond disciplines (Pohl & Hadorn, 2008; Van Breda *et al*., 2016). While disciplinary research remains an important mechanism for providing the building blocks of scientific knowledge, we need to draw on knowledge from several disciplines, including from across the social and natural "cultural divide" to address complex social-ecological issues. Knowledge from these different sources needs to be integrated (hence the need for inter-disciplinary research) and sometimes supplemented with knowledge from outside science (transdisciplinary research). So it is not an either or situation – both approaches are needed.

Hence, I sought to detect the links and relationships between the various stakeholders that were involved in tackling the water pollution problem. The research was carried out by following concepts and methods related to participatory action research (PAR) (Reason & Bradbury, 2006) which I applied as a tool to highlight various aspects of this place-based approach. As such, the actual delimitation of the empirical base for this study was guided by a heuristic, process-oriented research approach and not one driven by hypotheses. It is understood that process-oriented research approaches afford the researcher the necessary flexibility to adapt to the changing demands on researchers to create, maintain and guide the

spaces for learning and knowledge co-production (Wittmayer & Schäpke, 2014).

Building on the positioning of the researcher and the flexible and adaptive process, I framed the research approach as a *place-based study*. This enabled me to capture the unique interactions that marked the conflicting relationships that emerged around the polluted river. The place-based approach offers researchers the opportunity to co-create context-specific knowledge in an in-depth multi-faceted exploration related to a single social phenomenon (Bai *et al.*, 2016; Rogers *et al.*, 2013).

Place-based studies are especially suitable for developing new understanding and knowledge with reference to novel institutional arrangements, organisation and communities (Davies & Swilling, 2016) and provide appropriate strategies for finding solutions to ill-defined problems emerging from unclear origin, often complex in nature (Escobar, 2001). The place-based context, stakeholders and interactions will be discussed in depth in the following Chapter 5.

4.3   ASSEMBLING THE METHODOLOGICAL 'TOOLKIT' FOR ASSESSING STAKEHOLDER RELATIONSHIPS: USING PAR AND THEORIES OF CHANGE

The TD place-based case study approach provides a methodological framework that allows the researcher to assemble a methodological 'toolkit' with uniquely combined research instruments engaging with the contested space (Whiteman, 2012) For studying the stakeholder relationships in the Stellenbosch ERC, I combined two qualitative research methods, namely auto-ethnography (Denzin & Lincoln, 2003) and PAR (Reason & Bradbury, 2006).

Different data collection methods (see table 1 below) were utilised to maximise the researcher's involved role. Consequently, a combination of participant observation, key informants, unstructured interviews and facilitation of stakeholder meetings, focus groups and other transformative processes were all employed to understand and guide the conflict-ridden and broken relationships between various institutions and stakeholders in the ERC.

Table 1 - Summary of data sources

Source	Number
One-on-one unstructured conversations, explorative discussions	36
Appreciative river workshop	1
Parallel series	13
Multi-stakeholder events	4
Observer participant	20
Scientific forums	10

Source: Author's own compilation

4.3.1 Auto-ethnography: an observational tool

The explicit focus on transformation knowledge demands a deliberatively interactive engagement process from the researcher (Denzin & Lincoln, 2003). In order to generate transformational knowledge for dealing with governance relationships concerning shared water use and pollution, I inevitably served as the primary research instrument due to my role as mediator of the broken and contested stakeholder relationships. I participated with stakeholders and observed their roles as issue-owners, decision-makers and influencers, representing the governance relationships in the ERC.

I was thus located in a real-world setting that changed continuously. Using my own judgment and assessment of the information that I received during informal interviews, stakeholder meetings and other forums, I navigated my process. My personal experiences resonates well with similar encounters in the literature. TD researchers often have to immerse themselves in the context and navigate science–practitioner interfaces by means of 'process-oriented', auto-ethnographic approaches (Flyvbjerg, 2001; Pohl *et al.*, 2010).

Stemming from the discipline of anthropology, auto-ethnography is a form of qualitative research that allows the researcher to reflect on exploring and interpreting his or her personal experience (Denzin & Lincoln, 2003). In presenting his or her translation of the unfolding process to the academic community, the researcher adds to the body of scientific knowledge.

Denzin and Lincoln (2003) strongly emphasise the researcher's presence and function when engaging in auto-ethnographic, interpretive research. They state that auto-ethnography is a situated activity that locates the observer in the world, using a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self (Denzin & Lincoln, 2003).

Swilling (2014) argues that in many instances, the TD researcher is expected to manage the research process in a way that adapts to the data or interpretations of relationships between stakeholders. In practice, this creates for the researcher a more complex mode of double participation – as both 'participating insider' and as 'observing stranger'. This was also my experience. As researcher, I engaged as a participant observer in an action-based qualitative research with multiple cross-sector institutional stakeholders. As mediator and facilitator of stakeholder relationships, I (as the researcher) was part of the process of establishing, facilitating and participating in mechanisms of dialogue for change (Tengö *et al.*, 2014). At a third level, I became the interpreter.

In essence, this means that the heuristics of the process of engagement guides the research design. The role of the researcher can be described as that of a reflective scientist, intermediary and facilitator (Pohl *et al.*, 2010). Critical and self-reflexive transformative lenses on reality make the world more visible in a different way, by creating a space of shared experience and context, engaging in democratic dialogue as co-researchers and as co-subjects (Denzin & Lincoln, 2011; Guba & Lincoln, 2005).

Auto-ethnographic accounts allow for interweaving viewpoints and incorporating multiple perspectives for borrowing and integrating various perspectives, where borrowing seems useful, richness enhancing or theoretically heuristic (Denzin & Lincoln, 2003). The interpretivist perspective is defined as an epistemological position that requires the social scientist to grasp the subjective meaning of social action (Bryman, 2012). The interpretivist assumes that there are many subjective realities and aims to describe and understand phenomena through the meanings that others assign to them (Chapman, 2013).

Chapman (2013) explains that interpretivists describe how phenomena are experienced by the people involved. Studies focus on making meaning of the emergent complexity for human in situations. Relating personal and interpersonal experiences are key in auto-ethnographic inquiry (Clandinin & Connelly, 2000). Denzin and Lincoln (2003) explain that such observations are representational, relational and reflective, grounded in community and critical awareness, and a subjective understanding of reality.

Hence, my role as researcher became that of a bricoleur, a provocateur and interpreter, narrating a first-person account of how stakeholders took action to remedy a contested situation. I 'harvested' stories from the stakeholders about their life-world and realities, their experiences, developing a deeper understanding and trust with the stakeholders who shared a common societal problem.

My role changed to that of a catalyst engaging in narrative inquiry with participant stakeholders. This enabled me to explore and interpret how a community collectively reflected on responsibility for managing their natural environment, drawing from community consensus that which is 'real' and useful and has meaning (Denzin & Lincoln, 2011) in practice.

Instead of a typical analysis, I relied on critical reflexivity and on interpreting and acting on the feedback loops, interpreting a first-person account (Guba & Lincoln, 2005). This enabled me to use everything I experienced directly, including my experience of everyone's reactions.

4.3.2 Challenges of auto-ethnography

A typical challenge for auto-ethnographic research always remains the subjective nature of the practices associated with the intervention itself. This creates a delicate balance and perhaps an equilibrium that strives to articulate beyond the subjectivity of the exercise in and of itself (Tomaselli, 2013). This is a typical challenge for auto-ethnographic research, in which the 'gaze' is deeply rooted in how the researcher engages in and with the world. Nonetheless, the researcher is trying to move beyond the subjectivity in order to allow for some bigger points (that apply to multiple stakeholders and their interactions) to be extrapolated, both empirically and theoretically.

4.4 QUALITATIVE PARTICIPATORY ACTION RESEARCH (PAR): A TOOL FOR INTERVENTION

Participatory action research is an umbrella term for the diversity of ideas and practices that characterise a particular orientation of inquiry to do TD research in and with communities and to stimulate and create participation and action (Reason & Bradbury, 2006). PAR seeks to understand the world by trying to change it collaboratively, and emphasises collective inquiry and experimentation grounded in relating the personal experiences of the researcher and those of the stakeholders. PAR also advocates the harnessing of science in the service of intervention rather than observation. This means that science should be undertaken in communities or organisations with the aim of social benefit (Midgley, 2003).

There is a difference between cases studies and PAR. Case studies give researchers a means to gain a better understanding of how other people experience and respond to real-life situations. Although case studies are context-dependent, it is well established in literature that the researcher first defines the research questions they want study and then find cases where they can empirically develop understanding (Rogers *et al.*, 2013).

In PAR researchers and stakeholders engage to cooperate with the aim of defining a desired

future and undertaking well-informed actions that will broaden their knowledge, improve their competencies, and deal with challenges for a transformed future (Rogers *et al.*, 2013). Action research is, therefore, very much a process of generating personal and institutional change which implicitly requires deep trust between all parties.

PAR aims to create qualitative engagement, curiosity, and posing questions thereby gathering proof and testing practices (Reason & Bradbury, 2006). Moreover, PAR allows the TD researcher to use scientific observation (through auto-ethnography, for example, and other methods) to become a form of intervention. As Midgley (2003: 88) argues, "observation is undertaken purposefully, by an agent, to create change in the knowledge and/or practice of a community of people. It is this purposeful action of an agent that is the defining feature of intervention."

This coincides with Denzin and Lincoln's (2011) view of PAR as a viable research strategy, enabling a balance of rigour and relevance with great transformative potential. PAR is often associated with social transformation in the Third World, strongly reflecting the bent to action embodied in the perspectives of critical theorists and PAR (Denzin & Lincoln 2003). False-Borda defines PAR as a "vivencia, meaning life-experience (Husserl's *Erfahrung*) necessary for the achievement of progress and democracy, a complexity of attitudes and values that would give meaning to our praxis in the field" (Herr & Anderson, 2005).

The need to solve societal problems became emblematic of the need for participatory research, an alternative philosophy of social research (and social life, also referred to as 'vivencia'), to affect policy formulation or the redress of social ills, addressing social change (Alvesson & Sköldberg, 2000).

PAR approaches the dualism of individual versus social, and the objective versus the subjective, in terms of mutuality and as related aspects of human life and practice. This is to be understood dialectically, that is, as mutually opposed (and often contradictory) but mutually necessary aspects of human, social and historical reality, where each aspect helps to constitute the other (Denzin & Lincoln, 2003).

PAR allowed me to interweave my viewpoints with that of the many different stakeholders, incorporating the multiple perspectives heuristically (Denzin & Lincoln, 2011). I used reflective and collaborative methods to provoke the participating stakeholders in a collective explorative review of their responsibility for their actions in day-to-day reality, and to consider how to change their actions.

By being an embedded researcher, my auto-ethnographic data gathering method was

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consequently combined with a PAR approach, which aligned to what Van Breda and Swilling (2016) term Track II and Track III TD modalities. The Track I modality is marked by top-down process-driven research approaches with established formal stakeholders and institutions. In this mode, the TD research is circular and recursive, involving a certain amount of linearity.

The Track I modality is well suited for contexts where multi-stakeholder forums are normally well structured and where legitimate constituents are well represented by elected or appointed representatives in the process of knowledge co-production. These forums are designed to be 'conflict-free' spaces for participants to engage in on equal footing, sharing a vision and trust. This modality is useful as an 'ideal-type' (Van Breda & Swilling, 2016), not meant for exact replication but for designing context-specific frameworks in TD research projects. It represents a systematic linear-type approach as illustrated in Figure 2 on the following page.
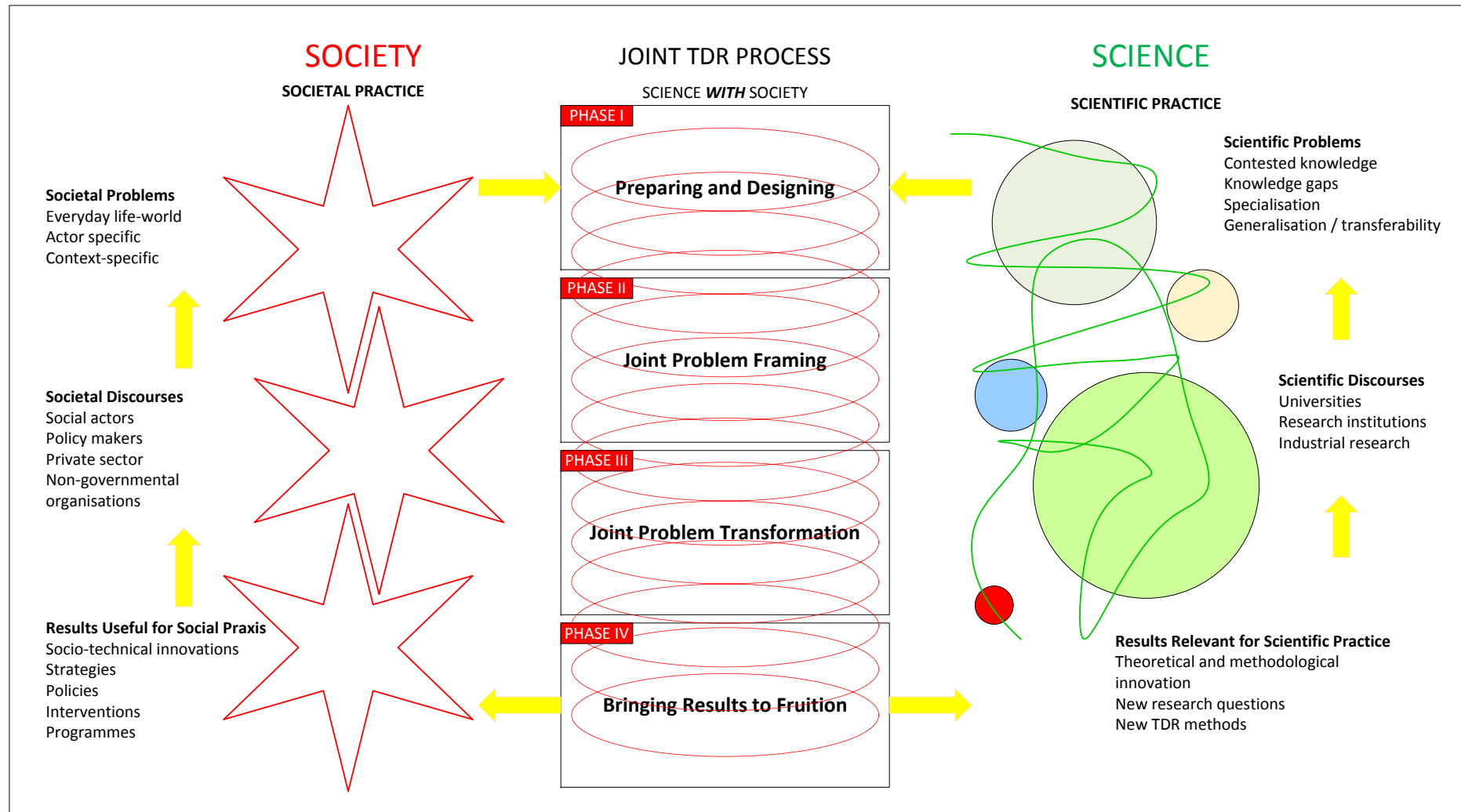
Figure 2 - Joint transdisciplinary process modalities

Source: Author's adaption of Van Breda presentation (2016); unpublished article (Van Breda & Swilling, 2016)

The process involves rational decision-making and planning, and participating stakeholders normally have access to both knowledge and resources to articulate and pursue possible solutions in pursuit of their own interests.

The complex SES context of the Stellenbosch ERC, however, was better approached by Track II and III modalities. These are denoted by methods that allow for bottom-up informal, social, actor-driven research approaches without pre-established relationships. Track II and III modalities are broadly defined as an informal, epistemic relationship building process, creating trust and empowerment through processes between researchers and individual community members, without necessarily mandated or equal representative status. The process depends on probing for social change prototyping multiple interventions, looking for evolutionary potential of the present 'side-casting'. Track III modality suggests collaborative, integrating and recursive research approaches. These allow the researcher to look purposefully for opportunities to foster better communication, understanding and exchange of information and exploring the relationships between stakeholders by navigating back and forth between Track I and Track II processes. These three modalities must be adjusted incrementally and applied iteratively to illicit meaningful collaboration between researchers and other actors to be of empirical value (Pohl & Hadorn, 2007). The following summary highlights the distinction between the modalities:

1] Track I

In this modality, the steps are not definitive; they are rather suggested as guidelines to work out the detail of individual context-specific transdisciplinary research projects, aimed at both social and theoretical outcomes.

2] Track II

This modality is broadly defined as an informal epistemic relationship-building process where power relationships and knowledge are not equal. The multi-stakeholder space is gradually assembled in an interactive relationship building between the researcher/s and individual members of a community (i.e. Enkanini case study[11]), or a community of interest (the ERC's TCG platform).

In the present study, the participants were willing and committed individuals who contributed to knowledge co-production, creating trust and empowerment through processes of explorative engagement.

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[11] Vanessa Stephanie von der Heyde, 2014. Towards a sustainable incremental waste management system in Enkanini: A transdisciplinary case study, SU MPhil.

3] Track III

This modality involves complementarity, multi-channel communication where I acted as observer, catalyst and interpreter in an emerging context.

In the present study, the aim was to generate a shared knowledge that would lead to a shared understanding, based on absolute respect for the collective and individual otherness that is united by our common life on earth (Shirvastava *et al.,* 2013).

4.4.1 Challenges and opportunities of PAR methodology

The fact that PAR is a largely unutilised methodology (Bergold & Thomas 2015), can be attributed by some inherently, "critical dangers" discussed by Babbie and Mouton (2014: 61-67). They range from reliance on "member validation by the insiders"; low degrees of control that can affect overall generalizability; objectivity; verification of challenges relating to trust; and representativeness or transferability that can impact the context related research findings (Bergold & Thomas 2015).

Participation and shared ownership of the research process recognise that the nature of our knowing hinges on experimental learning with the participants, in their personal reality in search of actionable solutions. "Participation is understood in the sense of co-managing the research process and co-generating problem solutions and new knowledge…pursuing the purpose of transformation instead of reformation" (Babbie & Mouton 2014: 61-64). The integrated activity combines social investigation, educational work, and action with the ultimate goal to transform and improve the lives of those involved – through action (that is when the co-participants and the researcher develop action initiatives). The participants and researcher partner contractually collaborate as colleagues in a consultative way (Babbie & Mouton (2014: 66).

4.5 ASSEMBLING THE PAR PROCESS AND CHOOSING THE RELEVANT RESEARCH TOOLS

After I had opted to observe and understand the relationships that marked the governance approaches in order to intervene and bring about change in the ERC, I realised that it would be impossible to begin with an over-structured research design. It is only after reflecting on my research journey retrospectively, that I could identify five distinct phases that marked my TD research process. These phases could not have been anticipated ahead of the research study, and therefore there was no existing outline or schedule that I could use to guide my consequent interactions and research activities. Linking with the proposed Track 3 modality of

doing TD research, as mentioned in the previous section, it seems that my own research journey unfolded spontaneously in relation to how I managed to make sense of the relationships and dynamics that connected and marked the stakeholder interactions relating to shared water use in the ERC.

Hence, reflecting retrospectively on the about 42 months that spanned this research journey from May 2011 to November 2014, the following distinct phases of engagement emerged to characterise the TD process.

4.5.1 PHASE 1: Scoping and exploring (May 2011 to September 2012)

During this initial stage, I needed to start making sense of the ERC area and the governing relationships that existed. The phase of scoping can be seen as the process during which I had to develop an understanding of the governing relationships that marked the unique SES and the place-based challenges faced by decision-makers. The process of scoping involved finding out who the possible stakeholders were, seeing that the notion of shared use of water was a contested issue and stakeholders were not in agreement as to who should be held accountable for taking responsibility of sustainable water resource management in the ERC. This phase comprised an exploratory phase during which I had to learn more about the issues, interests and perspectives of various governance approaches relating to sustainable development in the ERC.
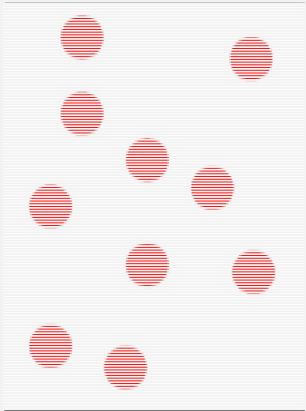
May 2011 to September 2012

During the process of scoping, I used the following methods to engage with stakeholders:

1] Preliminary discussions with various actors;
2] Observations at different formal events and platforms; and
3] Considering who possible actors could be for participating in the collaborative research process.

Figure 3 - Phase 1 Scoping

Source: Author's own compilation

4.5.2 PHASE 2: Identifying key stakeholders (May 2012 to June 2013)

Facilitating multi-stakeholder engagement for new corporate sustainable governance approaches started with the process of getting the right people involved in the right way and at the right time. During this phase, I started identifying possible key stakeholders who would be willing to engage in a collaborative process of renegotiating responsibility for the commons. It became clear that I needed to include various stakeholder views of the SES working across scales and sectors, representing various power relationships. Using an intentional engagement with actors, I started identifying the key stakeholders and negotiated access to their decision-makers and organisations in order to see what contributions they could bring to the process of re-defining governance approaches that could lead to better governing responses in the ERC.
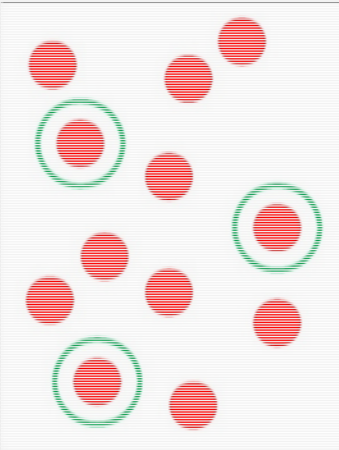
May 2012 to June 2013

During this phase, I followed a consultative and interactive generative dialogue process. I used the following methods/tools to identify the right stakeholders to engage with for my research:

1] Formal and informal meetings;
2] Informal, unstructured interviews;
3] Focus groups;
4] Generative dialogue to highlight issues and interests and to narrow down who the participating stakeholders would be; and
5] Collaborative problem framing with the stakeholders.

Figure 4 - Phase 2 Stakeholder Identification

Source: Author's own compilation

4.5.3 PHASE 3: Action/Intervention (June 2013)

After the key stakeholders had been identified, it became apparent that there was one common concern that connected their interests in sustainable governance issues. The polluted Eerste River was a common concern for all stakeholders, but there was no agreement

on what the corporate sustainable governance approach should be. Moreover, their relationships were punctuated by tension, animosity and a lack of communication. The multiple and conflicting perspectives of the system representing the different stakeholder interests and experiences had to be respected and valued to develop a robust implementation pathway to accommodate unresolved and differing perspectives.

Based on having assessed the needs of the stakeholders, it became clear that an intervention was urgent. The conflicted stakeholders needed to get together in a neutral space where they could voice their concerns, establish and improve relationships. This phase presented a key step in working towards the transformation of the system, and presented an opportunity to navigate social change and transitioning towards new sustainable governance approaches.
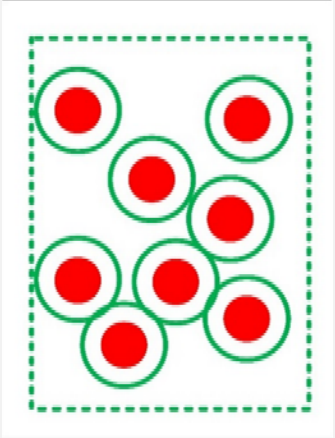
	June 2013 **In this phase, I used the following methods/tools to facilitate an intervention:**
	1] learning journey – river visit and appreciative dialogue 2] creating a safe space for further stakeholder engagement 3] relationship building

Figure 5 - Phase 3 Action Intervention
Source: Author's own compilation

4.5.4 PHASE 4: Building partnerships and networks (July 2013 to November 2013)

The intervention marked a turnaround moment in which stakeholders reconnected with each other and the river. The intervention further opened up a space where relationships could be re-negotiated and trust re-established to the extent that stakeholders expressed the need to form partnerships. Through this newly found collaboration, new corporate sustainable governance approaches could be created with the goal to create responsible stewardship initiatives around the challenges of shared water use in the ERC.

Through the strengthened relationships, stakeholders gained more legitimacy in the

constellation of relationships and connections that marked the ERC. Excitement about the newly found partners grew, and word spread that a new spirit of collaboration was kindled. Synergies emerged with other similar initiatives and interest groups. It seemed that the relationships were increasingly growing into a dynamic network comprised of various groups and interested organisations.
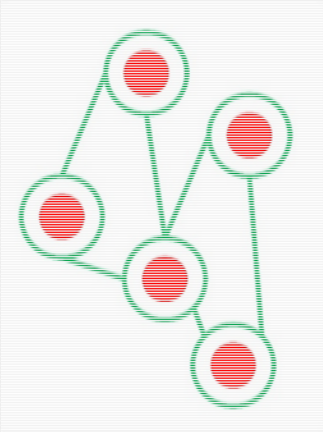
	July 2013 to November 2013 **This phase was characterised by the following activities:**
	1] Unstructured feedback sessions to exchange understanding, and clarify facts and perspectives; 2] Establishing small trust groups and thinking partners (a community of practice [CoP]); 3] Regular meetings with key participants to integrate feedback; 4] Building relationships with other organisations and interested parties; and 5] Attending workshops and partnership forums to share and connect.

Figure 6 - Phase 4 Building Partnerships

Source: Author's own compilation

4.5.5 PHASE 5: Organising and establishing the Stellenbosch River Collaborative (SRC) (December 2013 to November 2014)

Through a process of continuous facilitation and mediating of relationships, the need for a collaborative governance response was emerging from the stakeholders. People were fatigued by endlessly attending meetings and talking about issues, and wanted to create a more tangible and enabling platform from where they could take collective action.

After much deliberation and generative dialogue and interaction, it was decided that a new collaborative governing structure should be established. This collaborative would not be a regulating agency, but needed to create enabling platforms and channels through which action could be guided and projects implemented. Through the pooling of resources on many levels

(knowledge, experience, time, infrastructure, social capital and economic resources), a governance approach would emerge that went beyond 'business-as-usual' practices and which extended the agency of corporate governance into the SES domain.

	December 2013 to November 2014 **During this phase, the following processes materialised:**
	1] launch of the Stellenbosch River Collaborative; 2] securing funding for interventions and to design pathways for collaborative action; 3] establishing a governance framework; 4] establishing a Green Trust Partnership[12]; and 5] creating a reflective enabling space.
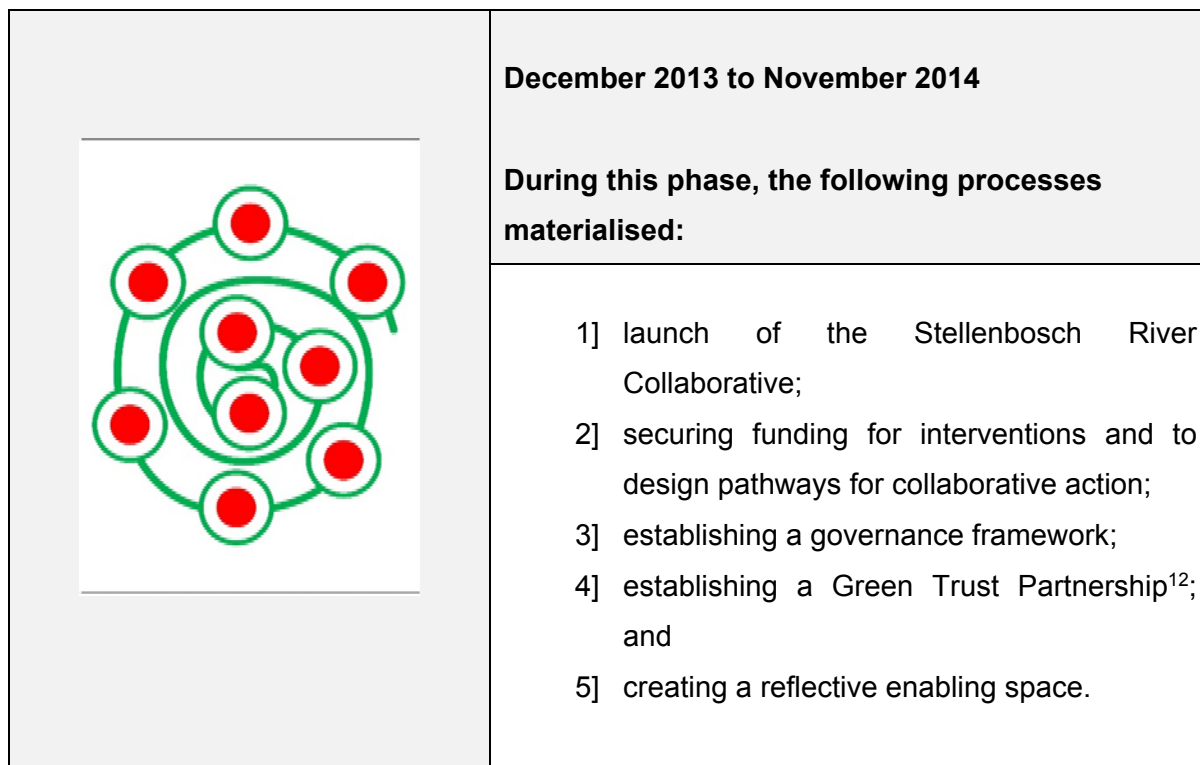
Figure 7 - Phase 5 Effecting transformation
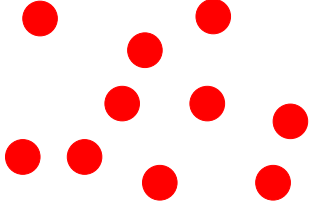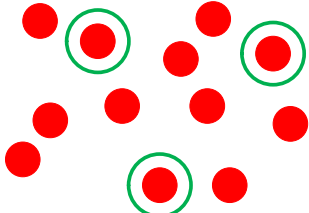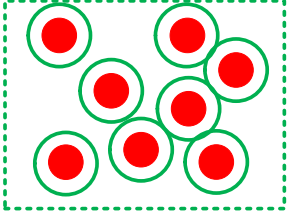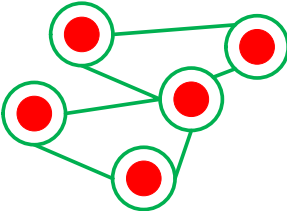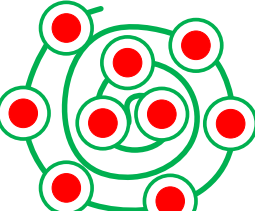
Source: Author's own compilation

These five phases present the interactive and participatory nature of the TD process in which I applied PAR as a method to create an intervention in which stakeholder relationships were repaired, and trust was re-established, in order to facilitate the emergence novel governance approaches.

Table 2 below summarises the five phases and the actions that marked the nature of interaction

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[12] Green Trust Partnership: "The WWF Nedbank Green Trust, co-founded by Nedbank and WWF-SA in 1990, is a mutually beneficial partnership between Nedbank and WWF-SA, which supports nature conservation projects through community-based programmes" source: http://www.wwf.org.za/what_we_do/wwf_nedbank_green_trust/; also see Augustine Morkel, 2016, WWF Nedbank Green Trust 2015-2020 Application Guideline

Table 2- The five phases of the TD research journey

PHASE	DESCRIPTION	ACTIONS	TIMELINE
PHASE ONE	**SCOPING** 	1.] Preliminary discussions with various agents as actors 2.] Observations at different formal events and platforms 3.] Considering the possible actors participating in the collaborative research process	From: May 2011 To: September 2012
PHASE TWO	**IDENTIFYING KEY STAKEHOLDERS** 	1.] Formal and informal meetings 2.] Informal, unstructured interviews 3.] Facilitating focus groups 4.] Generative dialogue to highlight issues and interests, and narrow down participating stakeholders 5.] Co-operative problem framing with the stakeholders	From: May 2012 To: June 2013
PHASE THREE	**ACTION AND INTERVENTION** 	1.] Learning journey - river visit and appreciative dialogue 2.] Creating a safe space for further stakeholder engagement 3.] Relationship building	June 2013
PHASE FOUR	**REBUILDING PARTNERSHIPS AND NETWORKS** 	1.] Unstructured feedback sessions to exchange understanding, and clarify facts and perspectives 2.] Establishing small trust groups and thinking partners (CoP) 3.] Regular meetings with key participants to integrate feedback 4.] Building relations with other organisations and interested parties 5.] Attending workshops and partnership forums to share and connect	From: July 2013 To: November 2013
PHASE FIVE	**ORGANISING AND ESTABLISHING** 	1.] Launch of the **Stellenbosch River Collaborative** 2.] Secure funding for interventions and to design pathways 3.] Establish governance framework 4.] Green trust partnership 5.] Reflective enabling space	From: December 2013 To: November 2014

Source: Author's own compilation

4.6   SUMMARY

In this chapter, I introduced a strategy for studying bottom-up, cross-sector, collaborative governance of a social-ecological system.

I used a transdisciplinary (TD) approach to navigate a collaborative, integrative and recursive research process. I explained how my role as researcher became that of a bricoleur, a mediator and facilitator. By engaging in a place-based TD study of the ERC, I immersed myself in the local context without any defences with an analytical research strategy. Instead, I relied on the emergent outcomes of navigating the dynamics of stakeholders for which I used the methods of auto-ethnography and qualitative PAR respectively, as tools for observation and intervention. This enabled me to reflect critically, interpret and act on feedback and real-time responses.

Having reflected on the research journey, I identified five distinct phases that characterised the different stages of the TD process. In Chapter 6, these five phases will be discussed in more detail. The following chapter provides a more detailed place-based context in which this TD study was situated.

CHAPTER 5

A PLACE-BASED STUDY: A NARRATIVE REFLECTION

5.1 INTRODUCTION

The Eerste River Catchment (ERC) in the Winelands, Stellenbosch region in South Africa has suffered a long-term decline in water quality over the past twenty years. Many attribute this to a protracted and embittered stakeholder conflict over watershed management issues. Stakeholders grew increasingly frustrated with the inability of government and municipal structures to abate pollution or even keep its sources in check. They were increasingly concerned about direct water security and indirect consequences including long-term impacts on the region's brand and economy.

This stalemate stood in stark contrast with an ambitious corporate governance platform, the King III, in force since March 2010, which aimed at setting global best practice, integrating responsibility with strategic and operational issues and making sustainability a legal requirement for all the publicly listed companies.

In this chapter, I reflected on the dynamics in this setting to contextualise my process and discoveries, which feature in this, and the following chapters. This captures the dynamics of what the river is and what the river does for different stakeholders.

I explain the ways in which the worsening pollution drives a rift among the many stakeholders. Lives and livelihoods are negatively impacted despite the many central governing platforms and guiding frameworks. I end by explaining this as a complex Stellenbosch social-ecological system, that can no longer be dealt with in isolation through top-down structural preconceived solutions of how best to clean the river.

5.2 CONTEXTUALISING THIS PLACE-BASED RESEARCH

Stellenbosch is strategically positioned to lead as an African innovation hub. Relatively small, Stellenbosch is one of the oldest settlements in South Africa with a strong history of progressive development in agriculture, the wine industry and fresh produce.

Stellenbosch is a sought after tourist and investment destination and a beacon of hope for those who aspire for better living, education and opportunities (Swilling, Sebitosi & Loots 2012: xv, 13, 313). Housing an excellent university with a long history, it is connected to innovative scientific break-through on different terrains, and theological and cultural inheritance (Swilling, Sebitosi & Loots 2012: xv-xviii).

5.2.1 The Stellenbosch region

Branded by its outstanding standard industries, agriculture, university and business leaders, and sport and arts, the Stellenbosch label invokes instant national and international status (Swilling, Sebitosi & Loots 2012: 48). The Stellenbosch brand could well be a poster for sustainability. It portrays reliable high net worth value and quality against old village charm of established and endorsed values with abundant pristine natural resources. It offers excellent wine products backed by a rich history of famous estates with the highest quality vines and prize winning wine producing cellars. This is due in large part to the region's premium products, sold in high-end retail outlets in South Africa and well known in global markets.

The overall economic prosperity of the Stellenbosch region (which outperforms the national property growth index) makes the region attractive to many (Swilling, Sebitosi & Loots 2012: 282-284). Stellenbosch generates a lion's share of international investments and tax income, both locally and nationally. Because of its economic importance, Stellenbosch businesses operate under close watch of legislative authorities, competitors, their consumers and society (Swilling, Sebitosi & Loots 2012: 258).

The Stellenbosch region grows 16.45% of the total vines of South Africa's wine grape vineyards and have 16.12% of the total hectares of South Africa's wine grape vineyards (South African Wine Industry Statistics (SAWIS) 2014: 9, Fig 5.2), with 2 producer cellars and 178 private wine cellars (SAWIS 2014: 8). Working wine estates, farms and wine cellars compete internationally. Wine tourism contributes significantly to economic growth and job creation, generating an estimated annual income in excess of five billion rand (SAWIS 2014: 42). Wine, wine for brandy, grape juice concentrate, grape juice and distilling wine totalled an estimated 1152.4 million litres for 2013 (SAWIS 2014: 16). The government received more than 50% of this profit in taxes (SAWIS 2014: 43).

In addition to the large and well-known producers – such as Spier, Distell, Stella Kaya, Neethlingshof, Boschendal, Blaauwklippen, Vredenheim, Beyerskloof and Asara – many producers in the Eerste River Catchment (ERC) grow grapes and other fresh produce (e.g. citrus fruit, lettuce, strawberries, pears, peppers, herbs and green beans) on consignment for

food and wine producing companies (e.g. Woolworths, Distell) or for export to the international market (mainly Europe and the USA) (SAWIS 2014: 32).

Stellenbosch is also famous for its natural beauty and heritage, high net worth properties attracting local and global investors and retirees. The Sustainability Institute is part of the School of Public Leadership within the University, and the town as such could be considered as the cradle for the idea and the practice of sustainability in South Africa (Swilling, Sebitosi & Loots 2012: 85).

Yet, Stellenbosch is a deeply divided community with a history of political and socio-economic dissent (Swilling, Sebitosi & Loots 2012: 233-235, 255-281, 308). The ever-increasing divide between abject poverty and great wealth is widening. Stellenbosch hides deep historical inequalities, many still visible today. The demographical and geographical layout of the town inherited from an era of slaves and masters, labourers living in poverty apart from their affluent employers and landowners and single sex hostels forcing families apart endorsed a hurtful past embedded in a theological understanding of separate self-determination and political ideology.

Stellenbosch is also a beacon of hope for migrating people pursuing education, jobs, a better life and opportunities (Swilling, Sebitosi & Loots 2012: 9, 255-281). Some end up as labourers, or work in the many agriculture production facilities such as wine cellars, fresh product producers and packaging. Most of these labourers either find their own way into this area or are contracted by labour brokers for harvest seasons. They stay, their hopes pinned on the agricultural sector, which employs thousands of labourers flocking from neighbouring provinces and countries north of South Africa.

Many of them end up living in shacks in informal settlements on land next to the rivers. Such localities are less visible to the well-established community, main routes, and authorities monitoring illegal 'squatting' on agriculture and conservation land. There is inadequate infrastructure for safe drinking water, sanitation, electricity or transport. These people are vulnerable, and Government remains responsible for providing basic needs. The Stellenbosch Municipality is therefore the local government authority responsible to provide these services.

Sustainability, one of the five primary building blocks of the Stellenbosch Municipality's economic development strategy (Swilling, Sebitosi & Loots 2012: 84-93, 306), is threatened by its inability to meet the daily demands for services and to maintain and operate infrastructure according to the required standard. The municipality is restrained by this complex and seemingly intractable dynamic from delivering sufficient and equitable basic

services, and enabling inclusive local economic development (Davies 2016, SITT 2012). This situation has a direct impact on industry, the agricultural sector and the relations between the different constituent interests (Marais *et* al., 2014; SITT 2012).

5.3 A COLLABORATIVE PARTNERSHIP RESPONSE

It is within this context that a unique governance arrangement was set up with the Rector-Executive Mayor Forum (REMF) in 2005, and two subcommittees – the Integrated Planning Forum (IPF), and the Infrastructure Innovation Committee (IIC) that replaced the short-lived (2011 to 2012) Stellenbosch Infrastructure Task Team (SITT) in 2013 (Davies, 2016: 13; SITT, 2012; IIC, 2014). This partnership brought together an array of stakeholders representing municipal officials, political representatives, selected private sector players, and university researchers and administrators, to jointly "tackle the region's development and sustainability challenges" (Davies, 2016: 13).

The REMF partnership constituted a hybrid space between the municipality and the university, and enabled collaboration between them guided by committed transdisciplinary (TD) research principles that accompanied it (Davies, 2016). Adopting a Learning and Innovation Approach (LIA), SITT followed a cooperative mode to bring together researchers and key decision-makers for applied research and expert inputs (SITT, 2012).

In 2012, SITT reported that the immediate problems related to the fact that the existing landfill was full, were:

1] that sewage treatment plants had reached capacity;
2] housing demands across the spectrum were unmet;
3] key components of the existing road infrastructure were in need of upgrading;
4] water supply in the long-term was not secure; and
5] energy supplies were becoming increasingly expensive, and were effectively capped until 2014 and possibly even later (SITT, 2012a and 2012b).

5.3.1 Pollution of rivers is one of many urgent concerns.

Pollution and degradation of the Eerste River Catchment (ERC) is a risk for everyone. It threatens[13] downstream communities, agri-business, jobs and riparian ecosystems. The ERC is part of the bigger Berg River water management area that was battling with the same issues.

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[13] Britz, T.J. & Sigge, G.O. 2012. A quantitative investigation into the link between irrigation water quality and food safety. *South African Water Research Commission. Research Report*, 1773: 1–4.

The Berg River Implementation Programme (BRIP)[14] resulted from a DWS led initiative set up as a collaboration forum in partnership with various stakeholders e.g. Main Berg River Irrigation Board (BRIB)[15], Drakenstein and Stellenbosch Municipality and DEA&DP, with a collective water quality management program.

Similar to the BRP, DWS stepped in under pressure from the Irrigation Board to take action on the pollution levels. The BRP came about when the Department made money available to properly address the problem of pollution with the other stakeholders. The initial Berg River water quality task team set up 2007 was a response to that pressure from the BRIB. The Berg River Water Quality Task Team was not successful initially. Driven top-down from government, the BRIP is a partnership between government and the community that includes the Main Berg River Irrigation Board, the agricultural sector with its landowners, farmers, and produce export agencies, universities and other research institutions, NGOs, Drakenstein and Stellenbosch Municipalities.

BRIP experienced conflict because of duplications and overlap of functions between provincial and national government, and mixed messages to the public as they were caught up in the unusual situation where different levels of government take active positions against each other, with legal and financial penalties. This interfered with clarity of focus and cohesion, as BRIP also included engineering consultants and businesses offering services and products, creating more confusion and fragmentation. In its fifth year BRIP was at best a problematic forum with at times debilitating competitiveness, conflicts of interest and general confusion as stakeholders received mixed messages and got caught in the crossfire, exacerbated by aggressive and agenda-driven reaction to information 'leaking' into the public and international domains.

At the heart of this conflict was poor communication from the involved departments (DWS and Department of Environmental Affairs and Development Planning [DEA&DP]), and duplicated functions. Currently the forum has gone quiet but the water quality issues have been dealt with due to better communication between the main role players. The root causes of pollution are about water quality problems and cannot be resolved by discussing it at the different forums. More long-term interventions are required for that. The current problem remains the poor communication and overlapping of uncoordinated intervention actions, ending up in

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[14] Berg River Implementation Program (BRIP): Western Cape Government Environmental Affairs and Development Planning   https://www.westerncape.gov.za/eadp/central-environmental-and-water-information-portal/berg-river-implementation-programme
[15] Berg River Irrigation Board (BRIB):
http://capewinelandsbiosphere.co.za/images/latestnews/Berg_River_dam_2014_project.pdf

repeat or conflict between the two agencies and the stakeholders. Similar to the Stellenbosch case, the political agenda seems to be a root cause of this stalemate.

The map in Figure 8 following on page 75 illustrates the Eerste River catchment area with its many tributaries.
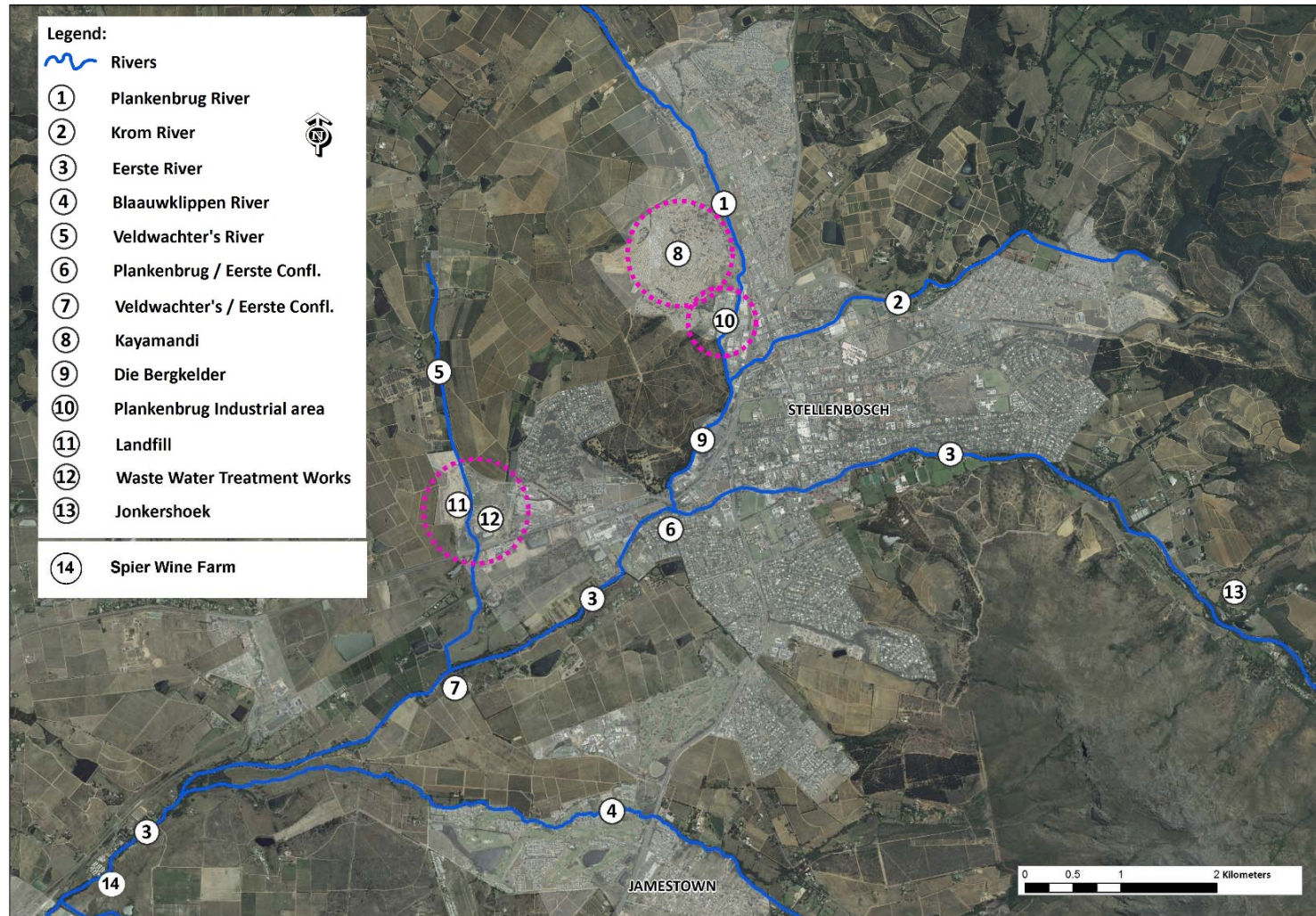
Figure 8 - The Eerste River Catchment Area

Source: Schalk van der Merwe, 2016, Environmental Planner: Spatial Planning, Heritage and Environment, Directorate Planning and Economic Development, Stellenbosch Municipality, with the addition of the 'Meet the River' detail from the author.

The water quality in the Stellenbosch rivers is unacceptable and unsanitary, and not safe for irrigation, recreational use and ecology. As pollution was getting worse and, the quality and future supply of water was jeopardising the environment, economy, water and food security, this posed an immediate health risk to the community. Although drinking water is provided in the informal areas as well, the health risk remains acute in the vulnerable low-income informal settlements, which are also flagged as one of the primary sources of pollution.

5.4   RESPONSES IN THE ERC

Prominent stakeholders in the conservation and the agricultural sector voiced their growing concern over the increasing risks of pollution and decline in water quality to the region's environment and economy.[16] The projection of future water demand and supply identifies the greater Stellenbosch and Cape Town areas as one of the main economic and population growth centres in the country. Access to the sustainable water resources for irrigation and safe drinking water, makes surface water management a strategic priority in the Western Cape.

5.5   PUBLIC GOVENANCE FRAMEWORKS

5.5.1 The Stellenbosch Municipality (SM)

The Stellenbosch Municipality is legally responsible for managing pollution in the river in their municipal jurisdiction. The ERC falls within their area. The Stellenbosch Municipality had repeatedly and publicly decried allegations of mismanagement and non-compliance for years. They maintained that the water quality was still acceptable. This position stood in conflict with concerns that the water quality was a risk to food safety of crops and health of people using water directly from the river.[17] Furthermore, the municipality and DWS relationship was strained by what the municipality refers to as a misunderstanding. They maintained that they were not liable for pollution in the rivers, and at best shared responsibility with DWS to deal with the pollution issues.

The municipality argued that owners are responsible for pollution control on their properties, and that the polluters were responsible to deal with their own back yard pollution. This meant that the informal housing on municipal property indirectly made the municipality the polluter and culprit. But pollution in the river is a shared responsibility which falls under the DWS's

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[16] Studies and articles are referenced in Appendix 4 on page 182.
[17] Studies and articles are referenced in Appendix 4 on page 182.

mandate to monitor and sanction polluters. However, DWS relied on the community, and therefore on the municipality, to report such incidents and to take measures to prevent this type of pollution. The municipality saw this as a technical and interpretive issue.

There are a number of causes for the pollution of the Eerste River that are all major concerns:

1] partially and inadequately treated waste water effluent discharging into the Veldwachters River from the Stellenbosch Waste Water Treatment Plant, (WWTP),

2] polluted storm water containing untreated sewage (grey water and black water) from informal settlements and formal townships,

3] unlawful direct industrial discharges into the Plankenbrug (refer to map), as well as

4] increased volumes of storm water during the rainy season.

The Stellenbosch Municipality did not upgrade the WWTP to keep track with the development of the town. This implied that the WWTP did not have adequate capacity to treat the wastewater from the developments. The WWTP received too much flow and was not able to take out all the nutrients in the wastewater.

Storm water infrastructure also needed to be upgraded. Storm water has to be managed in terms of sustainable urban drainage systems principles, which are currently not implemented by most municipalities. All these contribute to the deteriorating quality of the Plankenbrug River. The fact that the informal settlement in Stellenbosch is on a steep gradient causes all pollution within the settlement to flow directly into the river below the informal area in the winter rainfall season. Higher up, activities on farms produced pollution such as animal excrement and sewage flowing from insufficient capacity or no wastewater management measures. Agricultural fertilizers and illegal dumping added to the pollution of the Plankenbrug River.

The municipality's public stance stood in stark in contrast with public opinion. The municipality formulated the understanding of the situation as a misunderstanding driven by technical interpretation and 'wrong expectations' of the stakeholders and community. They claimed that they simply did not have enough funds for operation and maintenance. Investments in physical infrastructure were falling further behind, unmanageable with a big shortfall in annual income. Political agendas determined priorities.

Early in 2013, the gravity of this situation reached its apex as the Wynland Water Users Association (WWUA)[18] representing farmers (using water from the River mostly) individual

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[18] Wynland Water Users Association (WWUA): http://www.wynlandwater.co.za

users, conservation authorities, and ironically the municipality as a user too, called upon the Western Cape Agriculture MEC to intervene in the Eerste River's worsening condition.

The farmers who used the river water for irrigation of their produce, had for the last 20 years, fought an ongoing battle with the municipality over the sewage works as the main source of pollution. They were frustrated as the situation jeopardised their futures. Concern was growing that the fresh produce from the crops irrigated from the Eerste River no longer met the export standards set by the European Union (EU), putting at risk the region's fruit exports, and wine and tourism industry.

The Stellenbosch Municipality denied that the Eerste River was in a crisis. They maintained that the water quality was acceptable, with no risks to food safety and human health. There was dissension within municipal ranks. The municipal manager of the WWTP contradicted this statement and undertook to clean up the waste immediately.

The national media coverage[19] brought the ongoing 20-year battle with the municipality over the sewage works as the main source of pollution to the attention of the broader public. Both the Wynland Water Users Association (WWUA) representing farmers, individual users, conservation authorities, and the municipality itself, and the Department of Water and Sanitation (DWS) took legal action against the municipality for non-compliance.

The government has developed progressive policies for natural resource management, which are conceptualised in various spatial and other strategies. Stakeholders have the opportunity to review and comment on new and proposed environmental legislation, regulations and policies. Platforms such as the Integrated Development Plan (IDP), Spatial Development Framework (SDF), Human Settlements Plan (HSP) and the national River Health Plan with its Adopt-a-River programme existed. The DWS and the municipality, on a local level, managed the latter cooperatively. Despite these channels, many stakeholders from the industry and agriculture sector found it problematic to co-operate and interact with the local authority on these forums.

Early in 2013, the WWUA[20] called upon the Western Cape Agriculture MEC to intervene in the Eerste River's worsening condition. During the meeting that followed with the MEC, the WWUA and concerned farmers, the mayor of Stellenbosch accepted responsibility and

[19] Fokus (video recording) 3 March 2013. Johannesburg: SABC
http://www.sabc.co.za/news/f1/8e35b5804ec99c0087f4ff7da4cd6ad7/Fokus,-03-March-2013-20130306
[20] Waste Water Treatment Plant – Stellenbosch (WWTP): Kemp, K. & Du Plessis, J. 2013. Municipality report decried as "blatant Lie". *Die Matie*, 6 Februarie, 2013. http://www0.sun.ac.za/diematie/archive/2013/2013-02-06.pdf

committed to turn around this situation in a given period. The stakeholders expected strong leadership to improve water governance and rehabilitate the river in the water quality debate.

The situation did not improve, and the WWUA, filed for legal action against the Stellenbosch Municipality for non-compliance of the water license requirements on behalf of its members, forcing the Department of Water and Sanitation (DWS) - which has the national mandate to manage and protect our fresh water resources - to follow suit. Constitutionally, government agencies are discouraged from taking drastic measures against each other, and encouraged to resolve issues before taking legal action

Political cycles and changes in party affiliation have a huge impact on mobilizing long-term budget priorities. The current municipal political party, the Democratic Alliance (DA) won the last two elections from the ruling national party, the African National Congress (ANC). National and provincial departments such as the DWS and Western Cape Department of Environmental Affairs and development Planning (DEA&DP) cannot interfere with Municipal function due to legislated mandates in the constitution. Organisational turmoil in Stellenbosch Municipality, especially in the engineering section was another contributing factor to the problem. There was no continuity and it made it difficult for government agencies to engage with the municipality.

Municipal election cycles do not coincide with the national election cycles, so the ruling municipal party can differ from the provincial and/or national government. This introduces more complexity in water and other public resource governance frameworks. The national government agencies are managed by the ANC as the ruling party of the day, and provincial government agencies in turn by the ruling parties of that particular province, as determined in the national vote every five years.

DWS is a national government agency, and DEA&DP, the Departments of Agriculture as well as Housing and Planning are provincial government agencies under management of the Western Cape ruling party, the DA. DWS reports to the national minister of water and sanitation (ANC) and DEA&DP reports to the local MEC who reports to the DA Premier of the Province. Every provincial government reports to the national ruling party, the ANC.

An independent semi-state research based on DWS requirements, published damning results of a national study commissioned by the Water Research Commission (WRC) and the Department of Agriculture, Forestry and Fisheries (Barnes & Taylor, 2004; Britz & Sigge, 2012). The reports, authored by an academic team from the Stellenbosch University (SU), University of Pretoria (UP) and University of KwaZulu-Natal (KZN), substantiating an earlier

research study in 2003, dealt with the unacceptable water quality standard of the Stellenbosch river catchment. The publication of this article unintentionally coincided with the onset of the prosecution.

The study reported that the microbial quality (levels of human excrement and disease-causing pathogens) of the Plankenburg and Eerste Rivers did not meet the World Health Organisation (WHO) and DWS guidelines for safe irrigation. It revealed a high risk of exposure to human pathogens, especially when water from these rivers was used to irrigate produce that was consumed without further processing.

The findings were based on a thorough baseline study over three years (2007 to 2011) in the Stellenbosch river catchment, and focused on the impacts that polluted rivers have on food safety and human health. Other reputed researchers, including Dr Jo Barnes, a colleague of Professor Britz, had previously warned of the serious health risks posed by the increased pollution, and had attributed the high prevalence of intestinal diseases in the area, amongst other, to the pathogens from the river (Kemp & du Plessis, 2013). Dr Barnes describes pollution of our rivers as a 'slow onset disaster (Barnes, 2010).

This held great peril for the many residences on the riverbanks who drew water from the river for gardening or household purposes. Households who may have direct access to the river do not use water from the river for human consumption, but for day-to-day purposes in their broader household activities such as irrigating gardens or vegetable gardens, and recreational activities that bring them in direct contact with the water. Households from poorer settlements may engage with the worst polluted parts more intimately, doing washing, collecting water for household purposes while children play and swim in the rivers. The river also has ritual significance for water based religious ceremonies.

Pathogens of human origin were also found in boreholes, suggesting that pollution was seeping from the rivers into the underground water resources. Their research concluded with the caution that without measures in place, the serious problems for the agricultural sector and the local population would escalate (Britz *et al.*, 2007, 2013; Oberholster & Botha, 2014).

Rivers are essential for irrigation and remain a key strategic priority to the Western Cape, reinforced by rapid population growth in the greater Stellenbosch and Cape Town areas. Government undertook a big campaign to provide safe drinking water and proper sanitation services to people and discourage people from using water from the river for any purposes.

Drinking water is provided from dams and reservoirs higher up in the catchments and treated water distributed to the different water reservoirs for households in the urban area. Farms and

other households extract and purify their household water from their own water systems or from the nearest river or borehole.

5.5.2 Conflicts: The Department of Water and Sanitation, and Department of Environmental Affairs and Planning

The National Water Act mandates DWS to manage the water resources of the country nationally, while DEA&DP looks after the environment under the National Environmental Management Act (NEMA). There are different sections in DEA&DP dealing with different aspects of NEMA, such as listed activities authorization, waste management, contaminated land issues, compliance and law enforcement (green scorpions), pollution in general and air pollution. DEA&DP also manages projects that involve water resource management, which is in conflict with the DWS mandate. Without the knowledge or skills, this state of affairs regularly gives rise to interdepartmental and institutional conflicts, confusing the other stakeholders.

These stakeholders have been caught between these contradictions and conflicts. Held hostage in this disconnect between these two authorities, they feel trapped in the political conflict in which the officials cannot interfere. Meanwhile, business operations and interaction with the environment are under scrutiny from legislative authorities, competitors, their consumers and society at large.

5.6 SOCIAL-ECOLOGICAL SYSTEMS DYNAMIC

The impact of this disharmony reaches all sectors. The river is essential to the entire social-ecological system. Its decay negatively affects the rhythms of daily life. Many families no longer relax next to the river over weekends. Countless recreational activities and spiritual tradition, with water at their centre as a source of life and rebirth, were abandoned.

The degradation of the river poses a direct threat and material risk to business. Most producers buy water from DWS, the municipality, and the local Winelands Water Users Association (WWUA) as a water management institution for DWS. They are subject to strict monitoring standards managed by DWS. DWS has to regulate both institutions in terms of authorisations. Furthermore, most of these producers occupy property on the riverbanks, with orchards and vineyards reaching to the river and in reach of the water table that replenishes from the rivers. Property value is negatively impacted. The only users that use water directly from the river are those who cannot afford to buy either expensive water, or not in reach of the water infrastructure delivery system.

Had the severity of the pollution been acknowledged by any of the producers, their certification and even export market would likely have been at risk. This may explain why the issue has remained hidden for years, despite repeated calls of concerns from scientists in the region. Such natural problems cannot be dealt with in isolation through top-down structural preconceived solutions.

The river is not just a landmark. It touches lives and livelihoods in many different ways. As stakeholders confronted the worsening pollution, a variety of interests, mandates and responsibilities came to the fore. Blame was cast and shifted, repeatedly. The river itself, once an emblem and source of pride for the region, became front-page news as a pollution problem, a public embarrassment, a health and economic risk, and a culprit for human sickness and suffering. We needed cross-sector governance collaboration to find suitable ways to address this situation.

5.7   CONCLUSION

In this chapter, I have contextualized the setting of my research. I described the area with its many attributes and challenges, and focused on the complex issues around mismanagement of pollution in the rivers. I reflected on the dynamics on the different spatial and temporal scales, and the many interests, perspectives that gave rise to conflict and blame shifting.

I explained how the different central governance platforms and frameworks fail to address the issues, and fail a community with sustainability challenges.

Traditional research on pollution of the rivers mostly falls on the quality, and causes or sources of pollution, while governance focuses on legislative measures and relies on the King III for compliance, and as a valid response. These two approaches are not the solution. In this place-based study I realised I needed to focus on the polluted relationships. In Chapter 6, I propose a cross-sector collaborative governance (TCG) approach.

CHAPTER 6

THE STELLENBOSCH RIVER COLLABORATIVE (SRC)

A place-based response for mediating/facilitating collaborative corporate sustainable governance approaches: narrating the process.

6.1   INTRODUCTION

In Chapter 5, I discussed my place-based research, contextualising the setting. I described the space with its many attributes and challenges, and focused on the complex issues around management difficulties of pollution in the rivers. I reflected on the dynamics on the different spatial and temporal scales, and the many interests and perspectives that gave rise to conflict and blame shifting. I explained the ways in which the worsening pollution drives a rift among the many stakeholders, and how lives and livelihoods are negatively affected despite the many central governing platforms and guiding frameworks. This complex situation in the Stellenbosch social-ecological system (SES) could no longer be dealt with in isolation by means of top-down structural preconceived solutions of how to best clean the river.

The question that led me to embark on this research journey was propelled by the search to arrive at a deeper understanding of the lack of coordination between the anchors of the local economy. How could corporates cooperate with the Municipality, civil society and research institutions (such as the resident Stellenbosch University [SU]) to overcome the historic hindrances for strategic coordination and long-term integrated planning (Davies, 2016) for sustainable development? It also raises concerns over a lack of governance approaches to coordinate interaction between private and public partners in the SES space. In this chapter, I discuss how I went about to interrogate the context through an immersive, PAR approach.

Based on the five phases that characterised my research journey (see Chapter 4), I now discuss how each of these five phases unfolded by using a first-person narrative in which I situated myself as the main research instrument in the process of documenting and mediating the cross-sector, multi-stakeholder relationships in the ERC. The events are qualified through my interventions and reflection.

6.2 PHASE 1: SCOPING (MAY 2011 TO SEPTEMBER 2012)

6.2.1 Preliminary discussions with various actors

Starting out on this journey, I initially wanted to study how local corporates, who are influential local and global actors, make decisions about sustainable development in Stellenbosch. In my initial research proposal, I argued that the concept 'responsible society' could provide a governance framework that could deliver new solutions to sustainability challenges, and how it could provide new criteria to evaluate current corporate governance frameworks. I was specifically interested to learn if and how corporate governance frameworks guide local corporates to lead with their corporate social responsibilities to contribute strategically to sustainable development in Stellenbosch.

As a PhD candidate, registered at the University of Stellenbosch Business School (USB), I got involved in the TD research programme, hosted by the Sustainability Institute (SI). Through the partnership between the SI and Stellenbosch Municipality, I was invited to join the REMF's SITT proceedings from 2011, seeing that this would give me an opportunity to engage in strategic conversations with many actors at various levels of engagement in the ERC. I joined as a participant observer to learn more about the SI, the REMF partnership, and possibly receive guidance on how to articulate my research question and design before I approached industry in Stellenbosch. I assumed that my research might find a natural niche on this platform and contribute to the value thereof.

6.2.2 Observations at different formal events and platforms: Being a participant observer at SITT

The primary business of SITT has been to build up an understanding of the problem statement, institutional dynamics and future challenges for the Stellenbosch Municipality. SITT became an important platform for consulting the REMF on financial options, institutional challenges and alternative technologies. Conceptualising the challenges for sustainability, SITT reported on the immediate problems, identifying four sets of opportunities and strategies that needed addressing (SITT, 2012). They were:

1] new revenue sources;

2] fixing the institutional capacity problems;

3] introducing new technologies; and

4] attracting innovation funding.

Attending bi-weekly meetings between 2011 and 2012, I developed my understanding to a point where my inquiry questioned why industry, as an important anchor of the local economy, was not actively represented on this platform. I did not get clarification, apart from responses indirectly insinuating disinterest as a probable reason. Nor did it seem to be of relevance to the forum and its mandate. It was difficult to get a sense of how industry could cooperate for sustainable development in Stellenbosch owing to their lack of representation. I was not able to gauge their response to how the context affected them, and how industry could contribute to innovative solutions.

Adding to that, my perception was that the involvement of certain elected key business individuals and relevant government agencies nationally and provincially was limited to a stratified approach: a higher strategic positioning in the REMF itself, and the occasional engagement in SITT meetings through presentations and information sessions about regional, provincial and national development initiatives in SITT.

6.2.3 Considering possible actors for participating in the collaborative research process

I realised that I was beginning to review the relevance of the SITT platform to identify stakeholders for my research and started to scope for other possibilities that would also allow for corporates to be included in the forum. I engaged in preliminary discussions with SITT members from the Municipality and participating researchers involved in the SI TD research programme, in order to collate data for a more comprehensive understanding, and to verify the situation and the complexities involved. I further clarified my understanding (and confusion I often felt in the meetings) using SITT documents such as the working note on its learning and innovation approach and mandate, minutes of meetings and its terms of reference.

My impression of SITT was that the members who engaged with the REMF strategic team knew more and understood more than those outsiders such as myself, who struggled to understand the subtle intricacies, politics and the 'insider'–'outsider' polarisation I picked up. There was a constant tension I could not place, but I understood enough to realise politics was heavy-handedly present in this space. From an observational point, I had no advantage; I felt like someone who had landed in a situation to which I could not add value or from which I could not benefit.

Attempts to engage with other researchers to understand the different research projects underway in the SI and REMF space better, confirmed my discomfort. My attempts to collaborate with any research project was perhaps misinterpreted, I learnt later that TD

research in this context would be a solitary journey – contrary to the ideal type shared with us at the SI. Judging whether my research would fit in this space, brought the realisation that, unless I linked into the REMF strategy, I was on my own.

It became clear that my research did not fit well with mainstream research aims on this platform. The perception that industry was not interested in engaging at this level was a deep concern. It seemed that early attempts from the REMF academics to enlist the cooperation of industry were not considered viable to those approached, and did not seem to gain the support and attention necessary for progress. I had to be more creative in my approach. I had to reposition my research and approach industry from a corporate cooperation point of view.

I was reluctant to rely on what I perceived to be a top-down directed agenda of those elected to represent business in general. Discussions about how industry could participate and contribute to innovative and entrepreneurial initiatives concerned me. I learned from my previous experience, as political analyst and business consultant that established business enterprises are hesitant to cooperate with development initiatives by government, unless such initiatives are well established. Businesses do not adopt innovation for sustainability unless it fits with their core business and future strategies, or when they need to adjust to a new reality. Opportunity costs, return on investment, compliance, market needs, competition and future benefit inform business strategies. The input costs would not have been feasible, and it was debatable whether they would buy into solutions if they had not been involved from the start. Government usually has to enforce measures through legislation or bylaws or tax measures, or coerce cooperation through rebates or incentives to get business to comply with formal measures in place.

I decided to approach the Municipality independently, from my research interest in how corporate governance makes decisions about sustainability. The Stellenbosch SI would present a better platform for such an approach. To me, this initiative belonged to the Stellenbosch community with its different perspectives, to organise appropriate responses to its sustainable challenges from a whole-system perspective.

This was an invitation and call on the community to develop a shared understanding with key stakeholders from the academy, business, government and civil society towards solutions for a sustainable Stellenbosch collaboratively. I decided to collaborate with decision-makers who could influence this initiative from the outside through positively participating in my research while reaping benefits themselves.

6.3   PHASE 2: IDENTIFYING KEY STAKEHOLDERS (MAY 2012 to JUNE 2013)

After a process of scoping that took nearly twelve months to research, I was anxious to start to identify key stakeholders who could engage in a transformative, multi-stakeholder engagement process to navigate governance approaches that would fit the environmental challenges to the institutional goals. This process needed to get the right people involved ethically and transparently in the right way, at the right time. This included the stakeholder views of the system working across scales, sectors and power relationships.

It needs to be emphasised here that the process, which took another year of participatory action research (PAR) investment, was crucial. It is difficult to examine and explain this phase chronologically in terms of actions, seeing that it was characterised by intensive mediation and facilitation between possible key stakeholders. The activities included attending formal and informal meetings, conducting informal and unstructured interviews, hosting a focus group and engaging in generative dialogue to frame issues and interests to narrow down who the participating stakeholders had to be. These activities happened as and when required in the process of navigating the space. The next section will capture this mixing and weaving of all the different activities during various periods.

6.3.1 Widening the horizon beyond SITT: reaching out to industry

Paying attention to the municipal engineer's input at the SITT meetings, I realised that the task team was challenged to develop an effective response to the sustainability challenges in the absence of participation by industry. I wanted to learn more and understand what my next steps would look like to identify relevant stakeholders for my research from a sustainable Stellenbosch interest. I approached the Municipality participants in SITT to explore my options, and to learn who the key industry actors were.

My few ad hoc discussions with the Director of Engineering Services highlighted frustration over strained relationships between industry and the Municipality. He was concerned about the reasons for this conflict and outcomes. Although he fully appreciated the industry's doubt had about the ability of the municipality to cooperate fully with industry because of their constraints and institutional limitations, he also criticised their decisions. He referred to Distell to illustrate this problem.

Distell's strategy to install a small-scale waste water treatment plant (WWTP) for production effluent came up as an example, to explain how the Municipality was losing opportunities to

generate revenue because legislative compliance was pressuring industry to implement drastic preventative compliance measures. Yet, the same legislative framework was constraining the ability of the Municipality to engage proactively for cooperation with industry.

The Municipality reasoned that Distell had a responsibility to the greater community to contribute to the WWTP preferably. They were frustrated because Distell did not see it in the same light, and declined the Municipality's suggestion. Institutional and legislative frameworks that had to enable cooperation had become obstacles.

I understood the Municipality's predicament, and reasoned that if industry understood the real issues better, it would be possible to find a way to change this deadlock into an opportunity for cooperation from a corporate point of view. We needed a different way to get the governance structures to interact positively around this problem.

6.3.2 Identifying Key stakeholder 1: Distell – upstream dynamics

It made sense to start with Distell as best-suited candidate for my research. In the first quarter of 2012, I approached the Manager of Sustainability at Distell via a fellow researcher to negotiate for their participation in my research. At the time, my research question addressed a broad concept of the role stakeholder responsibility plays in corporate governance approaches for sustainability.

I wanted to use Distell as a case to study to show how corporates typically make decisions about sustainability. I was also interested to learn how they see their responsibility and to consider, if possible, how they could cooperate with the REMF initiative to deal with the developmental and urban sustainability challenges that affected the whole community across sectors.

Distell is the local wine distillery and a key industry and agricultural stakeholder locally, regionally and nationally. It is a major contributor to Stellenbosch's unique and distinguished brand, history and economy. Distell is one of the top wine producers and exporters in the world, and a prominent competitor in the global arena, earning valuable income for the local and national economy. I met with the Director of Innovation and Marketing, and the Manager of Sustainability, in June 2012 to discuss my request.

During this meeting, the role and management abilities of the municipality and government agencies in general were touched on. The pollution of the Plankenbrug and the Eerste Rivers came up as a perfect example of Distell's frustrations to explain their doubts about the initiative, the capabilities of the Municipality, and the partnership. Most of Distell's Stellenbosch

business premises are on the banks of these Eerste and Plankenbrug Rivers.

Effluent overflowing from its WWTP, informal settlements and townships and unlawful direct industrial discharges in the catchment area of the river, and the occasional storm water, which is a problem year round, causes pollution of the Eerste River. Industrial-related effluent spills, from wine-producing facilities other than Distell's own operations, were often attributed to Distell, the convenient usual suspect.

The company felt they were, with a few other big corporates such as Remgro, the go-to-source for funding. However, Distell was the convenient scapegoat to blame for pollution incidents that pointed fingers at industrial spills from wine-producing facilities near the Eerste and Plankenbrug Rivers. Distell is one of a few distillers in the area next to the river. The Municipality did not have the means or capacity to monitor and follow up on the spills.

A shift came at the end of 2012, when I attended the international Responsible Leadership conference and PhD colloquium at Spier. I engaged in insightful discussions with key international academics such as Dr Steve Wadell, who was working on large systems governance at the time, and Professor Milla McLachlan of the University of Stellenbosch's Faculty Medicine and Health Sciences, who was working on social innovation at the time. She is also a key actor at the South African Food Lab (SAFL).

The origins of the SAFL are in a multi-stakeholder workshop that led to a year-long change lab process, based on Theory U[21] (McLachlan, Hamman, Sayers, Kelly & Drimie, 2015; Scharmer, 2009; Scharmer & Kaufer, 2013). After the conference, I met with Professor McLachlan to discuss the social innovation process guided by the logic of Theory U, which is followed in the Foodlab. Theory U (Scharmer, 2009) as a theory of change made sense in the Stellenbosch context, since we were dealing with water security in a broader sense, and water security is connected to food security. Similarly, the situation also exhibited multiple elements of a complex social challenge, difficult to manage from a central point of view, or approach. With this understanding, I decided to use the same approach for my research.

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[21] "The U-Process is a methodology for addressing highly complex challenges— for solving complex problems or realizing complex opportunities. It is a "social technology" for effecting the transformation of reality, within and across the worlds of business, government, and civil society. The methodology of the U-Process and its application are tools that enable us to address our most complex, vital challenge" (Otto Scharmer 2009). Key processes are listening without judgement; reflecting on one's own and other people's perspectives; and recognising that alternative interpretations can be valid (McLachlan *et al*, 2015: 172). "The U-Process creates shared learning spaces within which teams of highly diverse individuals become capable of operating as a single intelligence. This mode of operation allows them to share what each of them knows, so that together they can see the whole system and their roles in enacting it. This "systems sight" enables extraordinarily effective individual and collective leadership. From this place of greater clarity and connection, the teams are able to co-create breakthrough innovations that address their most complex challenges' (Otto Scharmer 2009).

There were many barriers as to why Distell would not want to cooperate in a partnership with Stellenbosch Municipality, and therefore not participate in my research. However, these barriers also presented an opportunity to use as a turnaround strategy where the Municipality and Distell could deal with these issues collaboratively for the greater benefit of Stellenbosch.

6.3.2.1   Barriers and opportunities

Distell did not regard the Sustainable Stellenbosch Initiative and REMF partnership as a legitimised representation of industry interests. They shared many reasons and examples to illustrate their doubt in the sustainability and benefits of participating. They further perceived disconnect between the advances from key role players (the researchers and academic specialists mostly) to support the Sustainable Stellenbosch Initiative, and their own experiences and understanding of the situation and the ability of the Municipality to sustain this partnership.

History taught that political agendas manipulate and disrupt, and industry avoids being caught in the crossfire. It was clear that industry was reluctant to work with the Municipality, given the political nuances and slow processing and implementing of cooperative initiatives. Industry distrusted the electoral disruption and bureaucracy and chose to distance themselves from any involvement. In addition, given previous opportunities to cooperate with Distell, such as the transfer of ownership of Kyamandi hostel units from Distell to current tenants, the municipality had dragged its feet. The REMF partnership was only as good as the relationship it could sustain, and the committed cooperation of all the involved partners.

There was another reason for the scepticism I encountered. At the time, the university was involved in many research investigations about the water quality in the river, and Distell worked closely with some of these projects. They had not seen any results and changes happening at that stage.

Distell's sustainability strategy focused on their own footprints on their farms, clearing aliens on riverbanks, and participating in small corporate social projects. Their hesitation to commit to my research was assessed against the above realities. The liquor industry is facing tough regulation on all fronts in South Africa, and Distell has to deal with compounded context issues.

Stellenbosch is saturated with research projects at all levels. Distell is a main source for many of these projects. My challenge was to convince them it was worth their time and effort to participate in my research, and that the initiative was not just another short-lived project.

We provisionally agreed on the merits of my research, and my request was escalated to Distell board level for consideration. The company wanted to make sure they would benefit, and we discussed the merits of research projects in general, and their discomfort over the role of the Municipality in the sustainable development initiative.

Distell works with reputable academics, who consult them regularly on corporate governance and strategy matters or who present proposals and projects. They work closely with non-profit organisations (NPOs), and community-based projects. They also have manageable relationships with government agencies.

My role and skills required me to facilitate a dialogue process between the Municipality and Distell. I also had to explore my options in this issue between the two parties, to understand how to approach it differently, other than from the rule and compliance understanding. The Municipality represented the community interests, and Distell represented business interests in their institutional agencies. Local government and corporate governance approaches did not meet each other in this contestation about pollution in the Eerste and Plankenbrug Rivers.

I sensed that I needed to assemble a stakeholder platform from which to collaborate for a more contextualised understanding before we could deal with the issues. While I was waiting for news from Distell, I went ahead to explore the situation. I approached three of the Stellenbosch Municipality's engineers who managed the portfolios for landfill, storm water and roads and the wastewater treatment plant, to explore in detail how and why industry avoided cooperating with the Municipality. These were mostly ad hoc visits to their offices, to see if I could connect to their understanding of the overall situation.

During these visits, I learned that the engineers mostly enjoyed informal functional to good relationships with key industry decision-makers, but political interference disappointed, and formal organisational and budget constraints often got in the way. While individuals sought to collaborate, the entities they worked for were in disagreement over social responsibilities, mandates and compliance matters from governance and an operational point of view.

I also learned about the Stellenbosch Urban River Basin (SURB) Management Project[22] proposal for funding from the Netherlands. If the project proposal would not be accepted, the Stellenbosch Municipality would have to find funding from different sources, as the infrastructure budget had a huge backlog.

The Netherlands funding agency and project management company apparently expressed

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[22] The 2012 SURB proposal is available on request.

concern over the continuity and sustainability of the project objectives, once the project had been completed. Stellenbosch Municipality simply did not have the capacity to maintain and manage the technology involved in such an ambitious funded project. The engineers I met with were hopeful that their advocating of support for the SURB proposal would secure funding for the upgrades.

Like food security, water security is a socially complex phenomenon to govern, as there are multiple stakeholders and often opposing perspectives across sectors involved (McLachlan *et al.*, 2015). This was perfectly illustrated when SITT was aborted in the last quarter of 2012, partly because of political interference resulted in dissent, and practically because SITT only partly fulfilled its mandate. The municipality had to get its house in order before the university and other stakeholders could engage further.

For me, this underscored Distell's concern over a history and culture of discontinuous disruption in dealing with the Municipality. It fundamentally undermined any confidence or chance for trusting in the ability of the Municipality to sustain the REMF partnership and collaboration with industry.

Given the abortion of SITT, the REMF platform was no longer an option. I did not have access to the REMF, but I also doubted that it would or did make a difference. I repositioned my role as researcher, to go into the field and assemble my own research participants.

I approached the Municipality from my new understanding of the situation. I struggled to convince the Municipality's Director of Engineering Services to meet to discuss my research from a corporate point of view. It was my impression that the inner organisational politics clearly presented a heavy burden to carry.

Apart from year-end responsibilities, the Directorate of Engineering and Infrastructure was dealing with pressure from the executive office in the aftermath of the abruptly aborted SITT. It became clear in 2013 that the mayor of Stellenbosch was not satisfied with the progress and focus of the SITT. It did not meet his personal expectations and strategy. The mayor wanted innovation and visible change, and the pace was too slow.

The Director finally agreed to meet me in December 2012. I was under strict instructions that he only had 30 minutes. In the end, our meeting exceeded two hours, and we established a mutual understanding of the challenges for cooperation between the Municipality and industry. We discussed possibilities to move past the impasse, to get Municipality support as well as to include them as a key participant stakeholder in my research.

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At that stage, the Municipality was desperate to repair the relational damage and develop strong public–private partnerships to assist them with their manifold resource and capacity problems. The Director concluded that all the effort in the world could not and would not produce the results they were supposed to achieve. It was just not possible with their limited resources and funding and the increasing infrastructure demands. The Municipality was not responsible to supply the infrastructure; the developers were.

The municipal mandate was, according to the Director, to maintain the infrastructure. This mostly depended on agents' roles and influenced in the system. The Director, keen to establish better relationships and cooperation, suggested I approach the different stakeholders who had problematic relationships with the Municipality, while dealing with the consequences of the pollution of the river. He suggested I approach the Wynland Water User Association (WWUA), a Department of Water and Sanitation (DWS) agency, active in pressurising the Municipality to deal with the sources of pollution in the ERC.

We discussed my research, how to frame the problem in terms of range, the different issues and interests, and possible stakeholders. The Director encouraged me to approach a local producer who was severely affected by overflow from the Wastewater Treatment Plant (WWTP) on the Veldwachters River (see Figure 8, page 75), which joins the Eerste River at his property also. This producer, a key member of the WWUA, was involved in a long battle with the municipality over the pollution issues from the periodic WWTP overflows. Concluding our discussion, he pledged his support if I engaged stakeholders and brought them to the table to cooperate for solutions.

I learned from my different exposures and engagements that it would be possible to find a collaborative way for different governance structures to cooperate and find a solution collectively. I saw willingness to engage and work with the issues in a transparent and informative way. This also brought new perspectives and I had much to reflect upon.

I detected a shift that opened opportunities I wanted to pursue. I decided to approach my research from a multi-stakeholder place-based context and to follow in the spirit of widening the stakeholder audience to a more inclusive and representative governance framework. The December break was on hand, and I used the time to reflect and plan my next move early in 2013.

6.3.3 Identifying key stakeholder 2: Spier – downstream dynamics

After a meeting with the sustainability manager of the Corporate Office of Operations (COO) at Spier Farm, it became clear that this could be another key stakeholder. They are well known

and positioned for their work on water quality rehabilitation of their picnic dam, and partnership with the SI for research projects. In our meeting, I explained my research aims and requested their participation as a valuable participant for the work they do, and because they inherit pollution from upstream.

Spier is a landmark wine estate in the Western Cape, and a main tourist attraction, with restaurants and a hotel, situated on the banks of the Eerste River. Spier is also acknowledged for their committed efforts to sustainable practices, as part of deeply rooted and shared family values, prioritising people and nature, and the interaction between humans and the environment.

Coincidentally, Spier had a strategic session at the end of 2012, and made a conscious decision to reclaim their identity as a working farm, and to outsource the restaurants and hotel to a third party. My reasoning was that as a key stakeholder they should engage with other upstream stakeholders to deal with the pollution issues. This resonated well with their repositioning strategy. A few more meetings followed with the management team and owner-representative of Spier to clarify my research aims, and by March 2013 we had reached an agreement that they would participate actively.

6.3.4 Including more stakeholders for cooperative problem framing

What struck me was that both Distell and Spier were willing to engage in pro-active collaborative processes to tackle the problem of water pollution. At that stage, the forum initiated by DWS and managed by the Municipality to promote river health, was the Adopt-a-River initiative (AaR). There was a general feeling that this initiative failed its mandate in that it was poorly managed und underfunded.

The AaR did not strike me as a constructive positive space for stakeholders to engage and cooperate in collective action. My observation was that this open community forum did not thrive as I understood it should. As far as I could discern and understand, community members were upset by the lack of firm management, feedback and progress by the municipality. These meetings were supposed to be monthly, though apparently this was not the case. Feedback was slow or at times not available on time. AaR meetings were inconsistent, often cancelled or rescheduled, and when they eventually did take place, disrupted by frustrated community members representing taxpayers and other organisations concerned about small businesses and tourism.

The AaR platform seemed to become a public opportunity for service providers to sell solutions, something the Municipality welcomed, for it kept the difficult discussions and

confrontation at bay. Stellenbosch Municipality did not show leadership or resilience. The AaR was mismanaged, and met with deep dismay from the members representing multiple stakeholders across the sectors.

I needed to broaden my view to procure other stakeholders that could be drawn into a process of collaborative problem framing. Towards this goal, I attended various workshops (summary attached), seminars and public dialogues about water catchment management issues. I participated in public dialogues (for example, Reos Partners in 2013) and open forums, the Infrastructure Development Planning (IDP) think-tanks between the Municipality and the community in 2013 and 2014, and a first water management symposium initiated by the Department of Environmental Affairs and Development Planning (DEA&DP) and DWS in 2014, focusing on the Berg River issues. I also participated in Catchment Management Agency (CMA) public meetings in 2014.

I further had the opportunity to learn from the Berg River water management project, as I was invited to the Berg River Partnership (BRP) meetings by a fellow researcher from the University of Cape Town (UCT), whom I met at a Biomimicry Workshop in Stellenbosch. Attending the BRP meetings as an observer since 2013, and as a member of the steering committee since 2014, my impression was that relationships in river catchment management were deeply strained on these different platforms.

Upon returning to Distell to report back after my various interactions, I was sent to Distell's wine cellar operations and maintenance managers at what is known as the Berg Kelder to discuss their frustrations and embarrassment at the state of the river. The sewage and grey water seepage from Kayamandi/Enkanini informal settlements on the banks of the Plankenbrug River upstream from Berg Kelder and Adam Tas, where Distell's production premises are situated on the Eerste River, flow past them. The Plankenbrug River joins the Eerste River at the Adam Tas premises. Berg Kelder is a popular tourist attraction, and the stench and pollution is an embarrassment, particularly in summer.

The state of the Plankenbrug River created the perception among many visitors and tourists that Distell was to blame for neglecting its responsibilities. This perception also reflected on the Stellenbosch brand and products. Any attempts to clean up the river or to do maintenance on the riverbank of the Plankenbrug were constrained and frustrated by limitations imposed by legal frameworks. Distell had a keen interest in the well-being of the rivers, but they were frustrated by government agencies dragging their feet over decisions when Distell proposed initiatives. Attempts by Distell, as custodians to take responsibility for their part of the river and to improve the environment for their visitors and staff, were fraught by legislation guidelines

that were not user-friendly.

The Municipality pressured Distell to contribute financially to upgrade the WWTP. However, the WWTP is not a concern for Distell's operations or reputation. The Wastewater Treatment Plant (WWTP) is downstream (on the Eerste River) from Distell's Adam Tas premises. They had no reason to co-fund upgrades downstream. Distell focused on compliance, and they opted to invest in their own water treatment plant on their production premises, to treat their effluent. Several other sources were flagged as lesser concerns, but which remained needy of attention.

Deliberate and accidental industrial runoff of effluent and solids in the Plankenbrug River at industrial and business sites, and dumping of garden rubbish, landscape biomass, and fertiliser runoff from farming activities, as well as public-related waste, storm water inflow from the road as well as storm water infrastructure proved to be difficult issues to deal with. At that stage, the Municipality did not have the capacity for maintenance, cleaning up, monitoring and sanctioning.

Distell did not think they could change reality and prevent upstream pollution. They strongly felt that it was a municipal responsibility to address the causes upstream, arising from the informal settlement and from production and industrial facilities. Distell argued they could at least stay out of trouble and comply by installing their own plant to treat production-related wastewater at the Adam Tas production facilities on the banks of the Eerste River before the water was discharged back into the Eerste River. However, they could not escape the effect of upstream pollution in the rivers.

Distell was ready to participate in my research, and asked for a written update before we finalised. I explained the shift in my research, and where and how they fitted into that dispensation. I shared my new insights to frame my research as a collaborative approach between multiple stakeholders across the sectors in Stellenbosch.

6.4   PHASE 3: ACTION/INTERVENTION (JUNE 2013)

My research focus broadened from emphasis on corporate governance perspectives of sustainability in Stellenbosch to multi-stakeholder collaboration between Distell and other key stakeholders towards an effective governance system for sustainability around shared water use in the ERC. I saw my research as contributing towards a sustainable governance system of the ERC in the greater Stellenbosch area.

In submitting an addendum to Distell to explain why this shift was happening, I argued that the

use of the concept of governance as a technical power arrangement and decision-making structure only, was not effective (illustrated in Figure 9 following on page 98 below). We ended up with a buffer zone or a 'black box', where current governance systems fell short. We needed a different approach to extend governance reach into this space, and to interact positively. The goal was to create a self-sustaining system where stakeholders could interact and collaborate to manage their different interests in a self-sustaining sense.

With the shift, attention now turned to Distell and their relationship with other key stakeholders in the water quality issue of the ERC and social-ecological systems of the greater Stellenbosch area. The focus now was on a relational approach in a bottom-up cross-sector collaboration in a complexity-based situation. The process of collaboration needed to focus on a dialogue process to co-create an inclusive governance approach with all stakeholder interests overlapping in the social-ecological system space as represented by the 'black box' in the Figure 9 following.
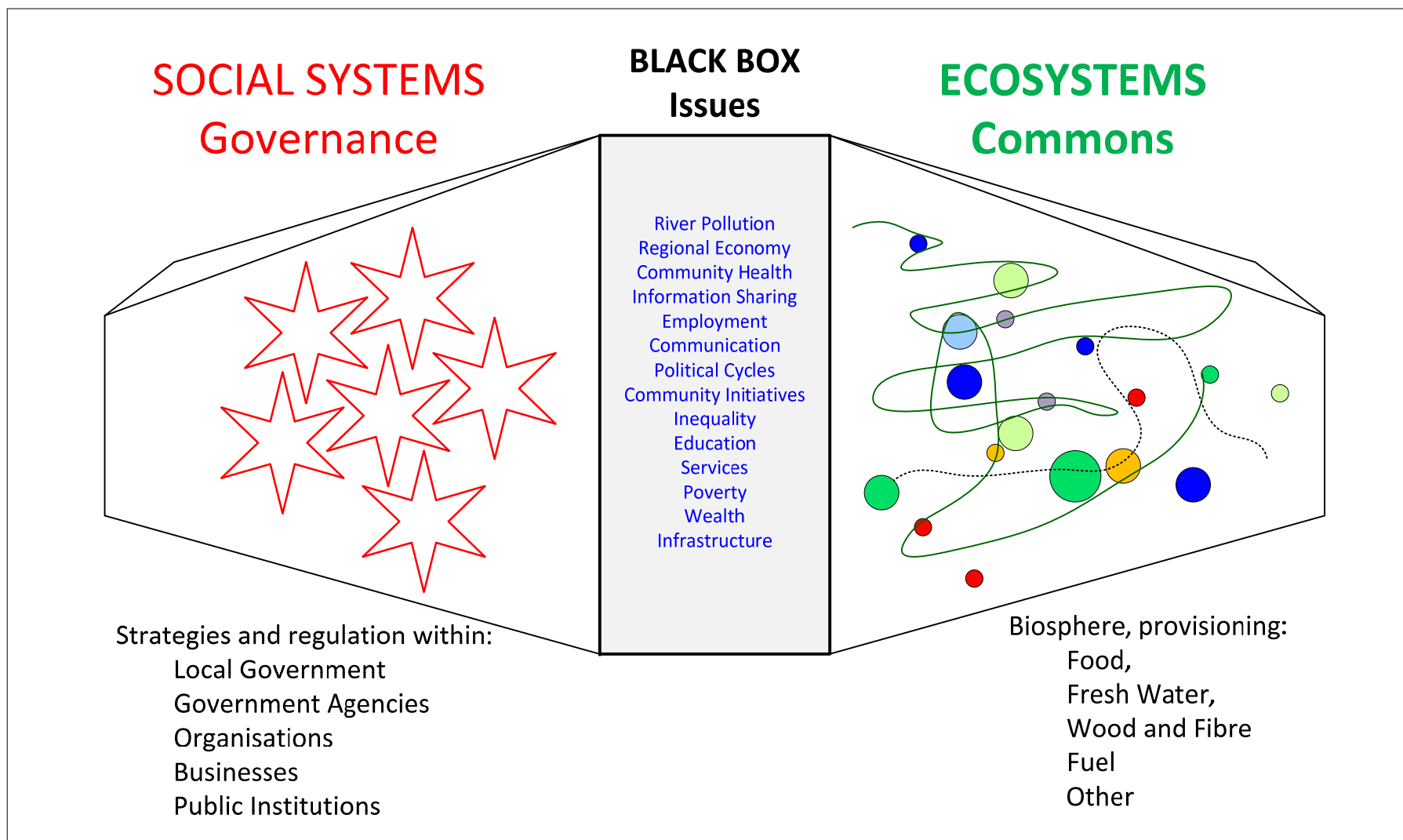
Figure 9 - Existing approaches and sustainable governance requirements

Source: Author's own compilation

6.4.1 Identifying the need for an intervention: role players and process of engagement

Identifying the stakeholders as a community of interest allowed me to include those directly affected by the state of the river, such as Distell, and those who engaged in this space through their agency roles. They were role players such as the DWS in an official mandate as custodians of different aspects in Catchment Management Agencies (CMA) with central decision-making powers, and others with social mandates to work on the catchment landscapes to educate and endorse water stewardship initiatives such as the World Wide Fund South Africa (WWF-SA).

I started a generative dialogue process with these multiple stakeholders to open up a space to co-create and share understanding and knowledge from the many different perspectives and power structures. Distell was open to unstructured explorative discussions, and while waiting for their final reply, I engaged with the key decision-makers involved in corporate governance affairs and sustainability strategies within the company (see Table 1 of meeting schedules as reflected in Section 4.3 of chapter 4 on page 54).

The stakeholders who agreed to participate were the WWUA (Wynland Water Users Association), the Stellenbosch Municipality's Directorate of Engineering and Infrastructure, (including the Adopt-a-River initiative), Spier, Villiera Wines, and Distell. The Departments of Water and Sanitation (national) and Agriculture and Environmental Affairs (provincial), as well as the WWF-SA, had to be accosted to participate. A few other stakeholders, such as Vredenheim, were under consideration. At the time, I considered including representatives from the Kayamandi/Enkanini informal settlements.

Instead of limiting the focus to a single perspective or avenue of inquiry, this space allowed me to open to different ways of thinking and generating ideas. These, in turn, would with any luck, allow intentional collaboration to take responsibility for different forms of governance in the social-ecological system space, changing the way we live in our environment and opening up alternative approaches to collaborate in decision-making across sectors.

6.4.2 Preparing for a transformative learning journey and appreciative dialogue

In early March 2013, I trained in using Theory U (see Scharmer, 2009) as a mediation and meaning-making mechanism. My own experience during this training was valuable to position myself as a 'research instrument', and to prepare myself to be open to the process that was about to start with the stakeholders. I identified 'my team', which I planned to assemble for my

research project. However, I realised that time and resources would not allow me to use Theory U as an instrument and vehicle for intervention in this context. However, I was convinced I needed to organise a transformative learning journey along the river to allow stakeholders to interact with each other. Inspired by the philosophy of Theory U, I aimed to co-develop a shared understanding and a multi-stakeholder network as a safe space to interact.

I needed to frame an intervention with the stakeholders who brought with them many different and opposing perspectives, which at this stage were messy to deal with. People did not want to deal with others, or were not interested in engaging at a level where they needed to spend time with adversaries and or where they had to deal with old hurts, conflict and blame. Ideas and perspectives about the solution were diverse, aligned with particular interests. I viewed them as accidental adversaries, brought together by the messy river, which in a way reflected and symbolised the messy relationships involved.

As such, I modified and adapted some of the Theory U principles to initiate a social innovation process with the stakeholders. Theory U was developed to guide transformative change processes addressing complex problems (McLachlan *et al.* 2015 168). McLachlan *et al.* (2015) explain that Theory U holds the hypothesis:

> that sustainable transformative change is a function of shifts in individual perceptions, perspectives and intentions, combined with shifts in collective perceptions and intentions. When individuals and groups take action based on changed perspectives and intentions, transformative structural and systemic change can occur.

The method is valuable to bring together stakeholders from different parts of the system, each with his or her own understanding and experience of the issues at hand to question their own roles in the system rigorously (McLachlan *et al.,* 2015: 171). McLachlan *et al.* (2015: 171) explain they need to link the deeper understandings emerging from these processes to the existing wisdom and jointly experiment with new ways of doing things.

For the purpose of engaging stakeholders, I decided to organise a transformative learning journey and appreciative dialogue, which coincided with the second stage of the U-process, namely the moment of presencing.
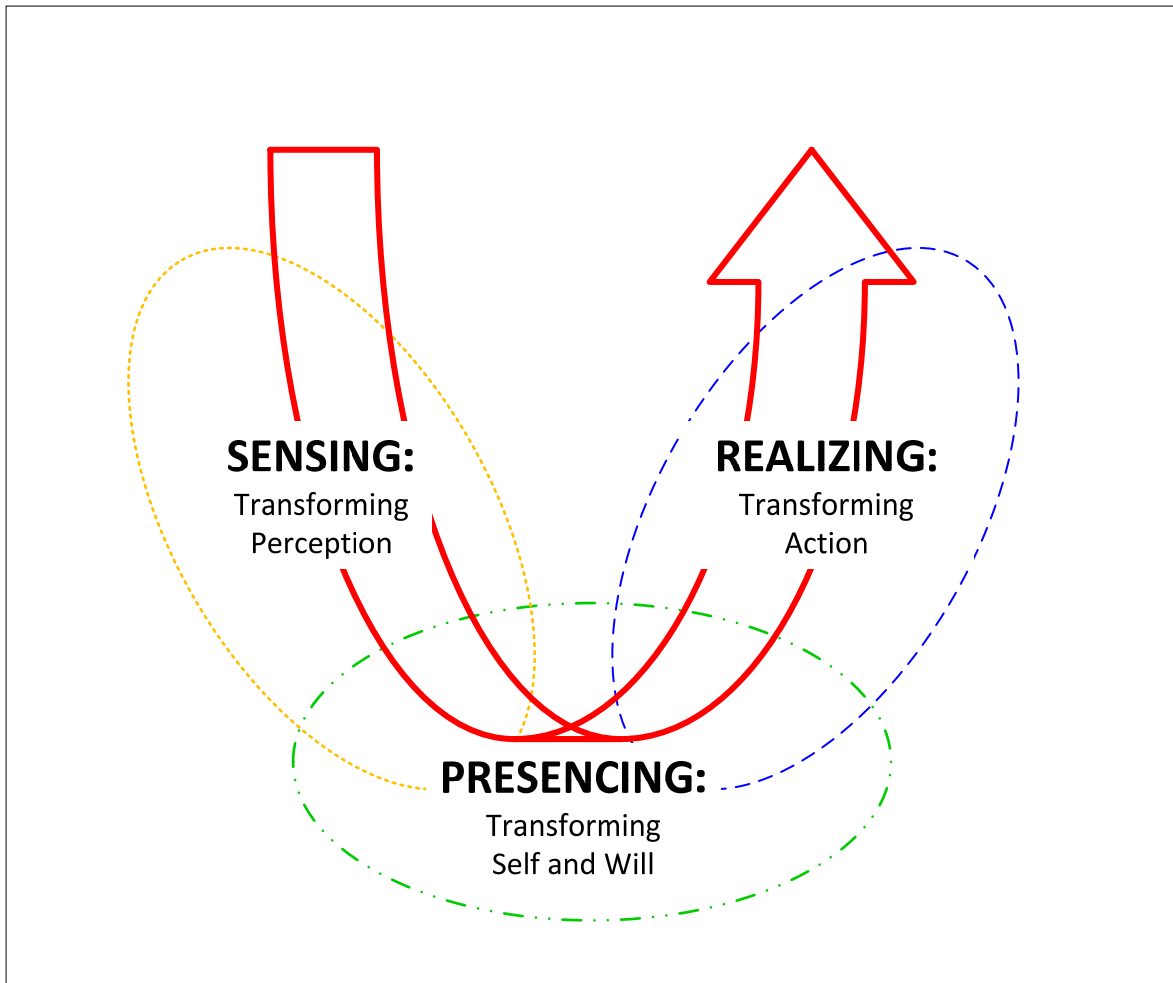
Figure 10 - A schematic representation of Theory U

Source: Author's adaption from McLachlan *et al.* (2015: 171)

Presencing involves stepping back from the analytical process to reflect deeply on what is going on, what is demanded from oneself and the group to change the situation. "This process activates collective creativity, which can lead to 'breakthrough' innovations for prototyping and piloting in the next phase of the U-Process" (McLachlan *et al.*, 2015: 171).

However, before I could embark on this intervention, I needed to get Distell's acceptance. After Distell had approved their participation in my research proposal in April 2013 (Appendix 5 page 183), they were open to unstructured explorative discussions. While waiting for their final reply, I opened my dialogue process at Distell. I engaged with the key decision-makers involved in corporate governance affairs and sustainability strategies within the company (see respondents Appendix 5, page 183) to start establishing awareness for my research and approach, and to discuss Distell's governance approach to sustainability and corporate responsibility.

We discussed and clarified elements of collaboration for my research. We brainstormed about

the context and their expectations of the outcomes, focusing on analysing and considering the context and relevance of certain terms in our language. In the end, I asked them a simple question, namely, what they would consider a successful outcome for my research.

The Director of Corporate Affairs answered this simply: "when a small group of people can work together to solve a common problem, no matter how small that problem or solution is". Distell wanted to collaborate. They expressed their willingness to commit to a process of developing relationships, to be able to collaborate for solutions of sustainability challenges. This need was often articulated in my many discussions that followed with the different stakeholders.

Distell wanted to see change and they were willing to participate, but they had reached a point of 'research project fatigue', and consciously chose to support research that would have a positive outcome. Many research projects focus on the wine industry and water quality of the river. Distell felt that they generally did not benefit from these research projects outside their business focus, such as the wine industry, viticulture, production, markets, export and quality.

In the meantime, Spier offered their conference facility. We invited all stakeholders trusting that those who showed up would be the role players we needed to move forward. I invited 50 people, all responded and 25 participated in the learning journey I called the 'River walk and appreciative dialogue'.

The outcome was positive. We agreed we had cause to go ahead, and I had to get back to them with a proposal on the way forward. We had the first stage of collaboration of committed and willing influencers and decision-makers.

6.4.2.1   *Connecting people and the river: the intervention*

With these key stakeholders' acceptance and input, I met with a few more relevant stakeholders. I brainstormed my suggestion with Distell and Spier in the focus sessions we had separately, and refined my approach to the other stakeholders. During my visits to the other stakeholders, I introduced my research and the collaboration that had started, and invited them to participate in our learning journey with the purpose of broadening the stakeholder group to include relevant decision-makers and influencers. The focus fell on enabling a space for open for constructive engagement where all perspectives from a governance point of view were represented, shared and included.

Since my Theory U[23] training, I had actively participated in the Cape Town Community of Practice (UCoP), where I regularly did 'case-giving' (i.e. tell the story and share challenges to overcome) to develop my insights and learning. I dealt with self-doubt, I needed support and guidance, and UCoP offered me a creative space to reflect on my role and understanding. In a case-presenting opportunity, I shared my research and challenges and discussed the planned river visit. Two experienced UCoP members, one a Stellenbosch resident and the other a director of an NPO working on living landscapes, offered to assist as facilitators and mentors. That would give me room to focus and hold the content and composite narrative, while they held the process and opened the space for me to interact and participate with the stakeholders.

The workshop was designed to create a microcosm around the problem domain where participants engaged on an equal footing as issue-owners and decision-makers. The primary goal was to open up a space where the participants could engage and connect with the river and each other, and develop a shared understanding of the current situation that was stuck in its complexities.

The intervention was aimed at getting people together to talk differently so their own understanding and work in this problem changed and brought about the shifting of consciousness and understanding of what was happening from different people's perspectives. We had to work together in a new and creative way. The emphasis fell on how to interact and relate differently to the river and environment, and as a community, to each other. The stakeholders needed to engage fully and organise to co-create a trustful, open and enabling environment to interact with themselves, the community, society and the river and its environment.

In preparing for the workshop, we co-designed the themes and the mechanisms to connect, reflect and participate in dialogue, directed via my insights. In planning, I consulted some of the key role players, such as the Municipality for logistics, Distell as my key participant, Spier who became a valuable thinking partner, and government agencies such as DWS, Cape Nature and WWUA for their input. The programme is available on request.

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[23] My research process was in effect a process of many U's I experienced in the different settings as UCoP member and researcher. It was as much about my own growth and improving my skills, as it was as mediator and facilitator in my participating and observing roles. It was important to be comfortable with the processes as I moved through the different stages and challenges in my research. Theory U is not about the findings-e.g. how the researcher moved from the data to the findings, but much more about what became data to the researcher herself. Theory U enabled her to observe – notice, feel and respond – to a broader and deeper range of interactions that might have remained hidden without participants' willingness to engage with Theory U.

6.4.2.2 *The journey along the river*

The stakeholder participants gathered at the Community Services Offices in, Merriman Street, Stellenbosch. The workshop began with a physical visit to three impact points on the Jonkers River (origin and upstream part of the Eerste River). These were at the Cape Nature offices in the Jonkershoek nature reserve, at the confluence of the Plankenbrug and Eerste Rivers between Die Boord neighbourhood and the Distell and Rembrandt premises entered from Rokewood Street in Die Boord, and the Plankenbrug River at the industrial area below Kayamandi on George Blake Street (see Figure 11 following). The visit focused on awareness building and observation of what was happening, to develop a collective understanding, followed by a generative dialogue session at Spier. In the generative dialogue, the participants engaged to reflect and share their observations, perspectives, institutional roles and challenges, to develop a shared vision through a deeper understanding through appreciation for each other, the river and the challenges.
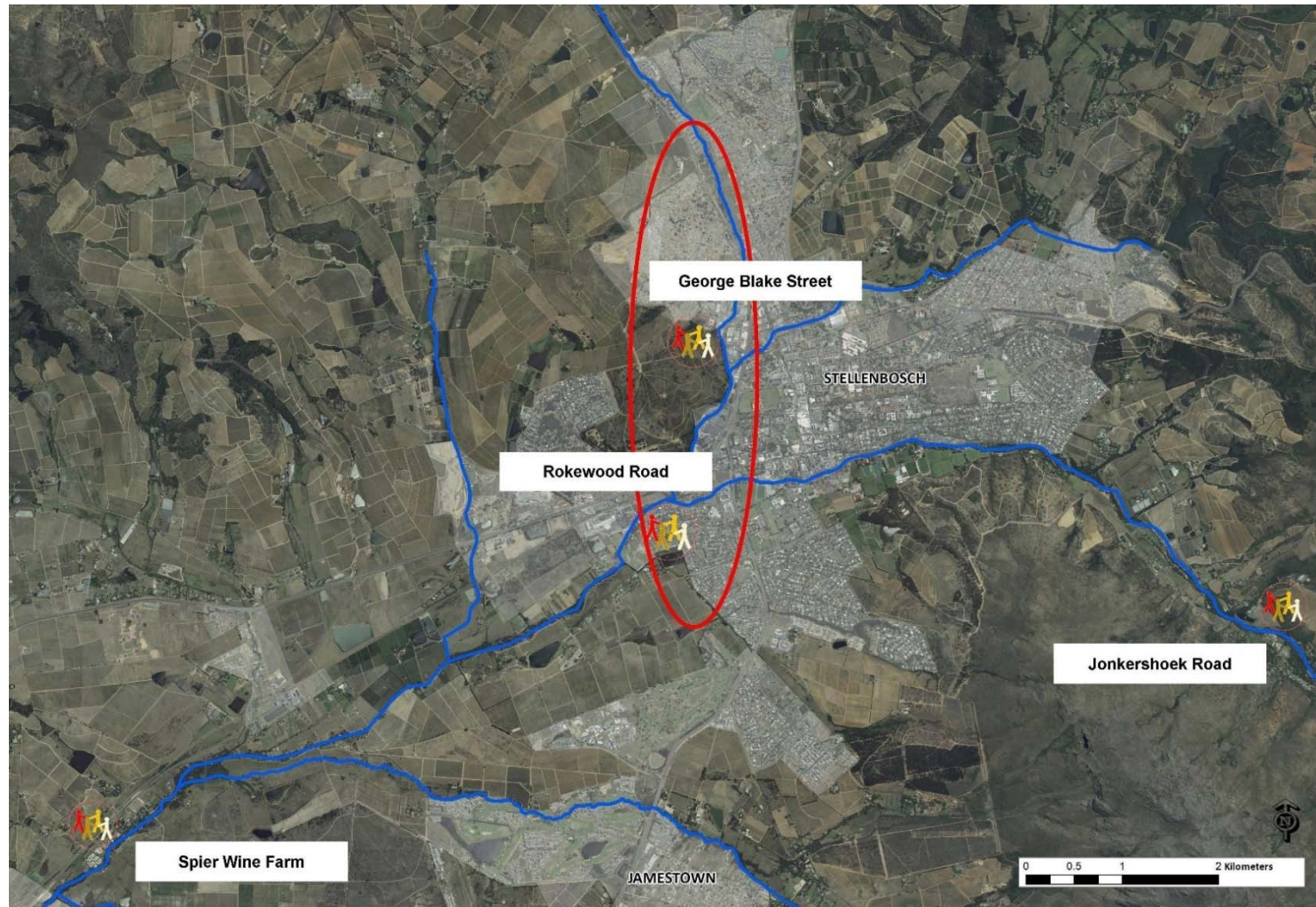
Figure 11 - Meet me, meet the River experience

Source: Schalk van der Merwe, 2016, Environmental Planner: Spatial Planning, Heritage and Environment, Directorate Planning and Economic Development, Stellenbosch Municipality, with the addition of the 'Meet the River' detail from the author.

Over the previous six months, I gained valuable insights into multi-stakeholder collaboration and partnerships I had developed. This journey was the synthesis of that collaboration, introducing the different partners to each other and pursuing opportunities for policymakers and decision-makers to meet and engage with each other in the SES space as depicted in Figure 12 below.
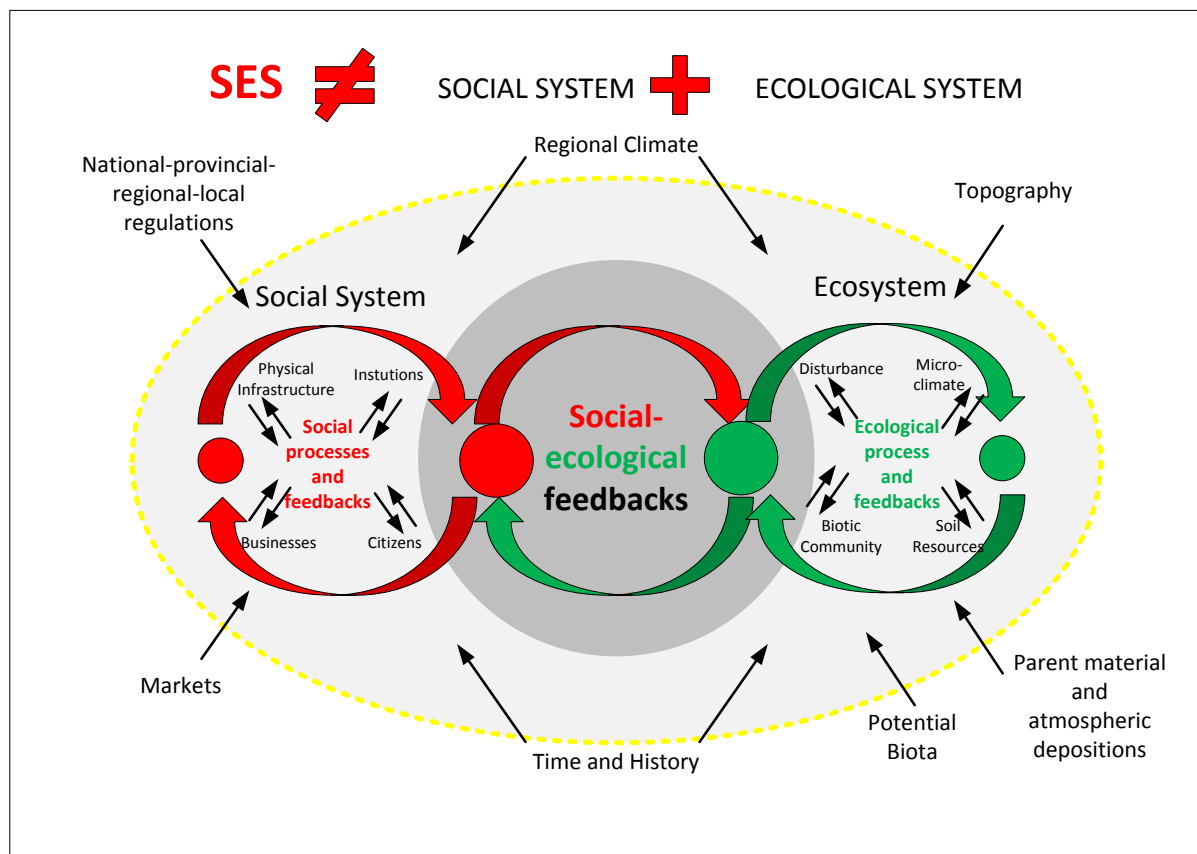
Figure 12 - Stakeholder system interaction: SES dynamics

Source: Author's adaption of Biggs, R., Schlüter, M. & Schoon, M.L. (eds.). 2015. *Principles for building resilience: sustaining ecosystem services in social-ecological systems*. New York: Cambridge University Press.

We met at the offices of the Stellenbosch Municipality Community Services on Merriman Street, where the Manager of Community Services welcomed the group. I did the introductions, and we pooled cars and travelled in convoy to the Cape Nature premises where the Cape Nature fresh water fish scientist welcomed the group.

1] Jonkershoek Road - At Cape Nature: Jonkers River

The fresh water fish scientist briefly introduced the river and its origins, and presented some biodiversity facts about the Jonkers River. The Jonkers River is renamed Eerste River when

it flows into town. I shared a composite narrative about the origins of the collaborative as a symbolic reflection on how the Eerste River originates in the mountains, as a rain catchment area. I reminded them that we started in a similar way and that we represented good intentions on how we needed to deal with our interactions with others, the river as an 'other' too in our interdependence. We would give voice and agency to each other, and the river.

The two facilitators held the process, to allow me to hold the space and content with the different relationships and contributing narratives. I 'emulated' a catchment area for the day. We provided each participant with a notebook and pen, and the facilitators explained the rules of engagement, with instructions and clarifying questions about the process. The stakeholders were asked to journal their experiences and learning as we followed the theme for the day. The facilitators explained to the group how to tell stories by engaging intentionally through deep listening, suspending judgement, and listening to each other and to themselves, in order to create an honest space where everybody was heard. The group introduced themselves, and shared expectations about what would make them happy by the time they left that afternoon. This marked the beginning of their responses, which they journaled. The group was required to journal observations during the day, guided by the following questions:

a. What issues or challenges are you confronted with?

b. Why do these challenges exist?

c. What challenges exist in the larger system?

d. What are the blockages?

e. What are your most important sources of success and change?

f. What would a better system look like for you?

g. What initiative, if implemented, would have the greatest impact for you? And for the system as a whole?

h. If you could change just a couple of elements, what would you change?

i. Who else do we need to talk to?

We started with a poem as a first story for deep reflection, to take in and enjoy the meaning of the story, in this group, at this place, at this catchment area, as we assembled in a connected circle. Thereafter we spent time at the site, moving around to view the river from different points, interacting as a group, sharing stories, observations and facts. Some of these stakeholders had never met before, although they were involved in the same

industries and public projects. Their organisations interacted on the same platforms, including stakeholders from the agriculture sector, governance agencies and the wine industry. This was a first personal encounter together in a safe space free from agency, sharing the same concerns in such a diverse group. The following images reflect the introductions at Cape Nature premises in the Jonkershoek nature reserve.

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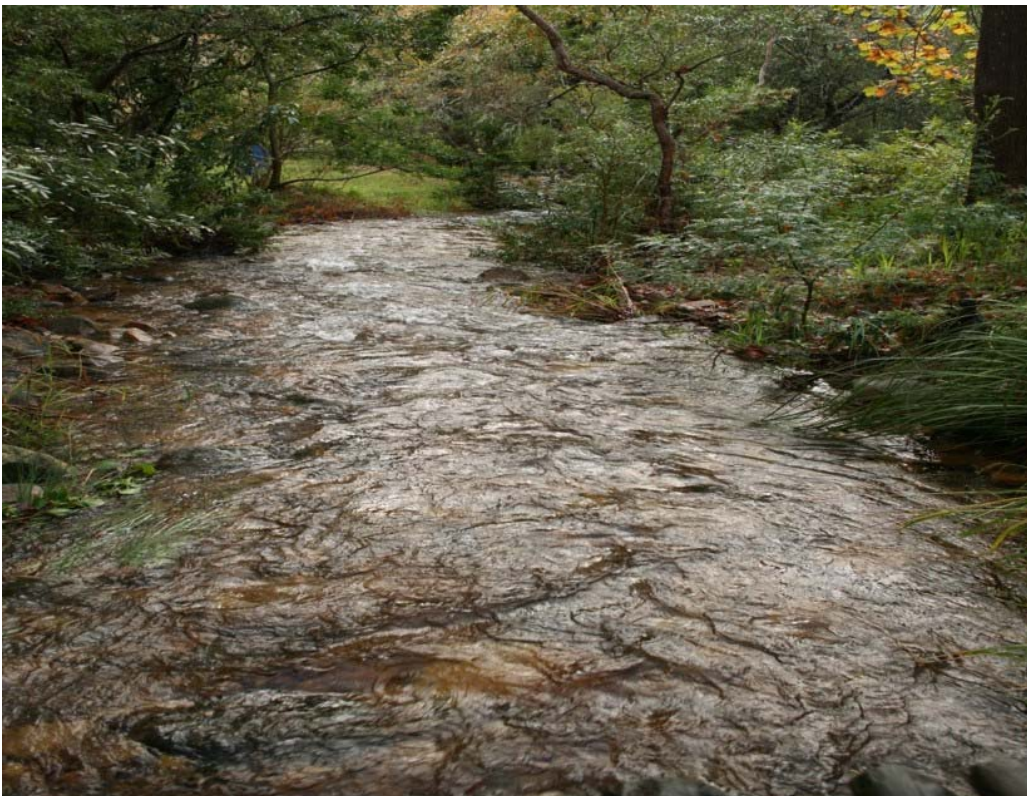
Figure 13 - Meeting each other and the river

2] Rokewood Road - The Eerste River and the Plankenbrug River confluence, two rivers, two discussions

The Plankenbrug River joins the Eerste River at the Distell premises across from where we stood. Signs of debris reaching the Eerste River were visible (a tyre, paper and plastic bottles, etc.). We also saw a black Plankenbrug River pouring its pollution into a fairly clear Eerste River flow at the weir. We stood next to expensive properties surrounded by high fences, a boundary between the public area on the riverbank, and private property. Some owners maintained a well-manicured lawn and flowerbeds right up to the river, while others neglected their back yard, where garden waste was dumped.

The theme for this stop was 'two rivers, two conversations'. We instructed the stakeholders to find someone they did not know, and to share with each other the following:

a. Observe the environment, the river, and share with each other what is different, and what does not sit right.

b. How does this/it affect you as an organisation, individually and the community now, and in future?

c. What is the new that needs to emerge, and come out here in this space and in this dialogue?

d. What do you need to let go of to understand, to put yourself in each other's shoes, to see the future and to see the system?

e. Other questions.

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Figure 14 - Two rivers, two conversations

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3] George Blake Street - The Plankenbrug River site group dialogue

Here, the effect of human presence was visible in the debris and rubbish in and next to the river. Flanked by the informal settlement and industrial buildings and facilities, the riverbanks were overgrown with grass, and the stream had become a visibly dark and stinking trickle. Storm water pipes clogged with rubbish that flowed from the informal settlement were visible, a picture of neglect and disinterest.

    a. We asked the group what they felt looking at it, and discussed it.

On our way to Spier, we drove past the Distell Adam Tas production premises, and the municipal WWTP and landfill premises the Veldwachters River bank. This was also an opportunity for the stakeholders to experience the visual effect of these landmarks on the industrial side of Stellenbosch.

Figure 15 - Plankenbrug River, group dialogue – the disconnect

4] Spier Wine Farm - Final destination

The facilitators asked the stakeholders to reflect on the visit in small groups over lunch at Spier in preparation for our generative dialogue that followed. By this time, new relationships were forged where stakeholders actually engaged in conversations.

Figure 16 - Reflecting on the journey

After lunch, we assembled in the conference room for the generative dialogue process, and sharing of journal observations. This was to start the process to develop an appreciation for this messy problem from a deeper understanding. I asked participants to let go of the blame factor, as we all knew the reasons and the issues. I wanted them to focus on the possibilities when we put ourselves in each other's shoes, but also to take responsibility as someone who could change the system.

The dialogue process focused on how to find new answers to old problems. A discussion followed to share the developing insights – which also generated more honest and open

questions. This was done in a small group reflection, in preparation for the world-café style session that followed. The following questions guided this session:

a. Where does this river come from, where does it originate?

b. Where is this river in the future?

c. How is this river the relationship between us?

d. If our interrelations/relationship(s) were a living being, what would it look and feel like?

e. What does it say about our interrelations?

f. Where are our interrelations/relationship(s) in the future? What would it want to be?
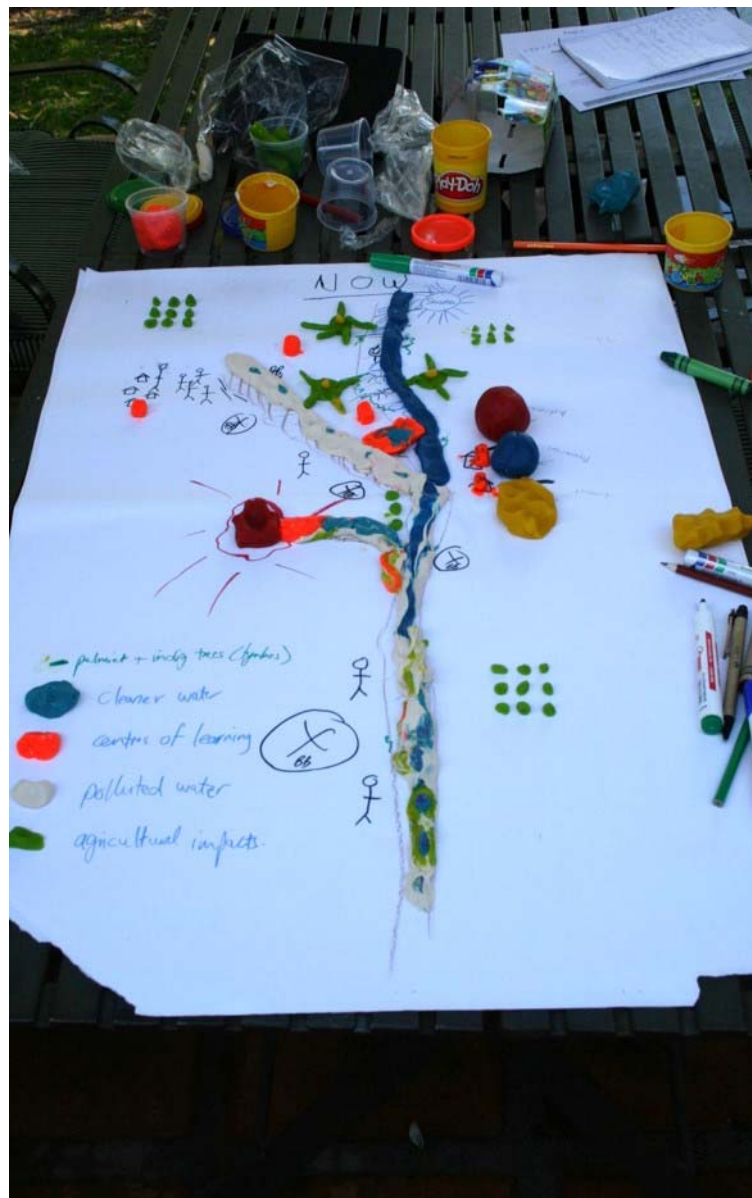
Figure 17 - Messy reality

We asked the stakeholders to assemble in groups of their choice for the first world-café session. The rest of the afternoon would be communication and sharing through doing, while interacting as a team. The motivation to work with visuals and material such as dough and colour pencils outdoors, right next to the Eerste River, was to encourage the different ways people connect and communicate to share and illustrate what they mean and feel.

With the first world-café session, we asked them to show us what the river looked like, to tell their stories and to share their understanding of the situation and challenges as a group. We asked them to answer the following questions:

g. What now?

h. What can you bring to the group(s)?

In the next session, we asked them to reflect on what they observed as a group, and how they made sense of it. Apart from the feedback interaction, they were also asked to journal their observations. In the last world-café session, we asked them to show us what they wanted to see in the future, what the possibilities for the river were. This time, we asked the groups to move around, engage with other groups, and to talk about their new rivers, what they understood and what they saw for the future.

We ended the day assembling in a circle for deep reflection on the day, and to debrief the group. I captured this on the white board.

i. What ideas does this experience spark for possible prototyping initiatives that you may want to take on?

j. What came out of the questions?

k. What good bring the new?

l. What are the next actions to take?

m. Who and how?

Figure 18 - Future perfect

6.4.2.3   Outcome of the transformative learning journey

We concluded by reflecting on the day and brainstorming on what we had learned. I used this as a debriefing opportunity, where the group collaborated to summarise the new insights, and to think about new ways for a governance system in the ERC, bringing together the different stakeholders and governance frameworks, to share and interact positively in the SES space. The questions and discussion that follows is a compilation of the responses by the stakeholders represented in the social setting in Figure 19.

Figure 19 - Stakeholders, social setting and a common ecosystem element – the river

Source: Author's own compilation

This space was now an established network committed to by the participating stakeholders, and we discussed the way forward as a collective instruction and framework. We used three guiding questions:

1] What is the bigger picture?

Looking after the whole river system is a governance issue. We need to organise a forum to streamline the different legislations, policies and procedures. The government agencies must cooperate to approach their infrastructure management as a whole system, integrating the needs of society, the environment and its economy. The private stakeholder needs the right framework and a project co-ordination approach to take action, to mobilise their response and to cooperate on a practical level. Businesses

need mechanisms to respond to and to feed upstream management practices into their own system. The river must be defined as the main structuring element for the municipality in its approach to integrated infrastructure planning and management, and as a pivotal element within the Stellenbosch society and its identity.

2] How do we move from an individualistic society with individual goals to a common goal around the shared use of water?
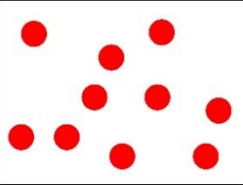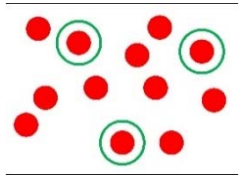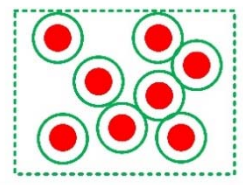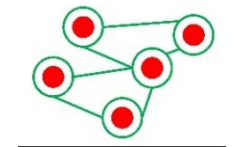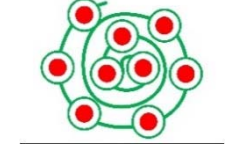
The catchment area represents an enormous community with different stakeholder groups and yet, the visit told a story of a lost connectedness in this community. Emphasis must be on re-connecting and collaboration, in a space where opportunities are available to educate, to access available funds, launch projects, influence and to sustain the energy. By sharing a vision of hope, and a great willingness to collaborate with all relevant stakeholders, the community can relate to the river as a pivotal structuring element of their environment. They can build relationships in the community through engaging in initiatives and taking responsibility to repair and maintain the river collectively. The forum can assist to provide a user-friendly toolkit for accessing and interpreting policy or legislation, and to engage in a systemic initiative with a practical framework.

3] How do we make the river better for everyone's benefit, and where do we start?

It is crucial to reach out and engage with other stakeholders, sharing what we have learned and what we can offer as an enabling collective. We are not ready to make major decisions yet, but this group can help to create the future agenda, to shift the awareness and collective understanding into the different zones on the river and to provide the how to (this was described as a 'toolbox'), information and know-how. We already have possibilities that are accessible. Soft engineering approaches, such as wetlands and the riparian zone, are natural and available options to clean and purify the water. Alternative ideas, such as filtering the polluted part of the river through a system designed to purify the water (i.e. wetlands), before it joins the river system again, were also shared.

We identified an action plan, summarised in Table 3 below.

Table 3 - Joint action plan

Action	Focus
Identify key stakeholders to engage fully with joint activities of analysis and developing responses	1] Government agencies 2] Economic sector 3] Social systems 4] Scientific partners 5] Other platforms and initiatives 6] Connect to NGOs (such as WWF) with the help of DWS
Organise a sustainable platform	1] River rehabilitation 2] A coordinator to drive the process 3] Status reports 4] Broaden the space to share in scale 5] Open communication channels 6] Manage interfacing in network
Analysis of situation	1] Remove barriers: what do government agencies need from private players? 2] Interpret and streamline understanding of the legislative framework. 3] Identify the various levels to approach and work with to mobilise the contacts. 4] Input and reports from specialists to inform the stakeholders about the problem, explain the reasons, where it is and what they recommend (see articles as referenced in the Appendix 4 on page 182). 5] Analyse the various available strategies. 6] Learn from benchmarks and other case studies.
Strategic vision	1] Plan, projects and champions 2] Whole-system approach 3] Use available spatial and other strategies of governing agencies (i.e. IDP)
Focus and place for intervention	1] Plankenbrug River 2] Studies about the pollution 3] Social issues 4] Insight from BRP initiative

Source: Author's own compilation

The results were collated in a summary report and shared with all stakeholders, for their feedback and for my reflection.

6.5   PHASE 4: BUILDING PARTNERSHIPS AND CREATING A NETWORK (JULY 2013 to NOVEMBER 2013)

With this river journey, stakeholders took a decisive step towards finding ways to interact and engage meaningfully in search of a common approach to the issues of shared water. We were ready to collaborate and develop 'locally appropriate' interventions. We encountered our first big challenge when DWS notified me they were prosecuting the Municipality for non-compliance regarding the WWTP pollution. This meant that DWS and Stellenbosch Municipality were prevented from engaging in sessions and meetings that involved the Municipality until further notice, or until the process was dealt with by the prosecution team.

Meanwhile, I continued my process of engagement. My strategy was to be the connector between DWS and the Municipality. The rest of the relationships proved to be invaluable and opened new options and pathways to interact ethically and transparently, as was proved by the collaborative commitment to pool resources in terms of time, information and events. However, the impasse between the DWS and the Stellenbosch Municipality threatened to reach a stalemate in the collaborative space. The Municipality was vulnerable, and publicity was negative. I tried to keep the information flow open between these two key stakeholders.

The 'action list' kept me busy and we were moving into a more formalised space. During this time, the DWS approached me to convene a meeting between them and the Municipality. The Municipality welcomed this and I scheduled a meeting, including the WWUA. Not discussing the prosecution, we focused on the intentions of collaboration, and how to deal with the stalemate at that stage. This meeting was the turning point. We could discuss all the difficulties in the DWS–Municipality–WWUA relationship and clarify unnecessary blockages, to such an extent that the parties around the table offered assistance to each other where challenges were highlighted.

The collaborative was back on track. I communicated this to the other key stakeholders, who responded enthusiastically to the good news. This relationship was a major obstacle we cleared and we agreed on the way forward. I could now actively approach more stakeholders identified at the workshop such as the Stellenbosch University Water Institute.

My role was to coordinate and drive the process, since I held the composite narrative, and that database I had built up over the preceding seven months. I had access to every stakeholder in this group, and I continued to work the network, meet with the stakeholders, exchange

information and updates, and generally keep the communication channels open and information flowing. The stakeholders capitalised on these relationships and the network, connecting with each other directly, always keeping me informed and updated when it involved the collaboration. I had a pivotal role to ensure cohesion and harmony of actions.

I participated on various platforms such as the IDP, BRP and CMA meetings, keeping abreast with developments and sharing the existence of the collaborative initiative and connecting to key actors who could join as stakeholders. It was important to find synergy with other similar initiatives and actions that we could build upon and connect to. The news spread and created excitement and interest. Other stakeholders and actors in water management initiatives approached us as the news spread and stakeholders shared it more widely.

The Municipality benefited from this, through improved cooperation with industry and other stakeholders, and synergised actions. The space became attractive as excitement grew over its significance, and the network was formed and defined by strong links to key partners and stakeholders. We were growing a strong identity and presence not only in Stellenbosch, but in the wider region, and even internationally.

Spier hosted Dr John Todd from the United States, for consulting on soft engineering of wetland technology, and invited stakeholders from a wider perspective to participate in his workshop. The DWS and some other stakeholders participated. The workshop concluded with a public dialogue over collaboration, partnerships and soft systems infrastructure, with Dr Todd as the anchor participant, in which the DWS and I participated.

The WWF connected with me via Cape Nature to participate in their Journey of Water as a speaker late in October 2013. This contributed to wider exposure. The WWF took interest and joined the collaborative.

The collaborative became a strong network with respectful relationships between key stakeholders, sharing the same goals and focusing on the same actions in the SES space as illustrated in Figure 20 that follows on page 110. The process of establishing the SRC acted as a catalyst for transformation in local government to assist with coordination to engage, and with role sharing between stakeholders in the social setting in Figure 19, page 105 and the river as natural object in a place-based social-ecological system.
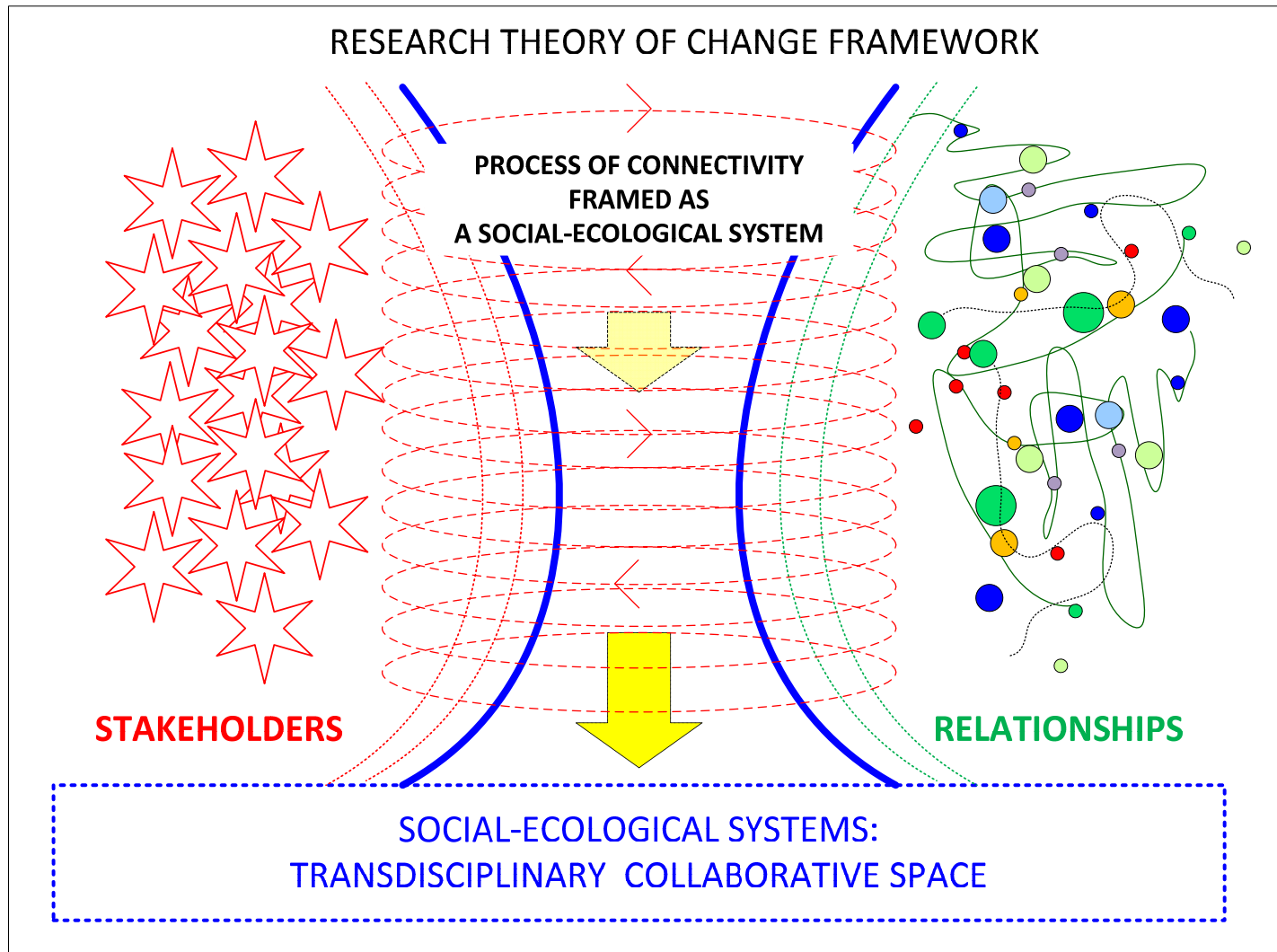
Figure 20 - SES as the transformational collaborative framework

Source: Author's own compilation

6.6   PHASE 5: TOWARDS A CROSS-SECTOR COLLABORATION FOR GOVERNING IN SOCIAL-ECOLOGICAL SYSTEMS: LAUNCHING THE SRC (DECEMBER 2013 to NOVEMBER 2014)

The collaborative was ready to establish a governance framework and we agreed to launch formally as the Stellenbosch River Collaborative (SRC) on 29 November 2013. We invited the new stakeholders to join us for this significant meeting. The WWF played a guiding role in planning the launch.

At the launch, the collaborators and the new stakeholders were introduced to each other. Spier chaired this meeting, and WWF participated in contextualising the importance of this initiative in their national water stewardship strategy (can be found online at http://www.wwf.org.za/what_we_do/freshwater/). Distell articulated the goals to restore health to the Eerste River collectively, and Spier summarised the focus on taking action as a collective.

Everyone was committed to meet again and to work with the emerging dynamics from a space that is about trust, restoration of relationships and the river. The aims were to engage and enable action. It was agreed that we would formalise our structure of partnership, and would arrange these partnerships and the many other relationships. The SRC was launched and we continued from early 2014. During this time, we gained support and attracted participants to implement solutions. I collaborated with an NPO, and we obtained Green Trust funding with a three-pronged focus: to organise the SRC space and set up a secretariat; get support for writing up my dissertation; and to identify seed initiatives in the community.

The SRC is developing an enabling space marked by a well-connected network and partnerships to support and navigate governance approaches in SES as illustrated in Figure 21 following on page112. Collectively, stakeholders hold this safe space between them to reflect, brainstorm and pool resources and knowledge, access and support.
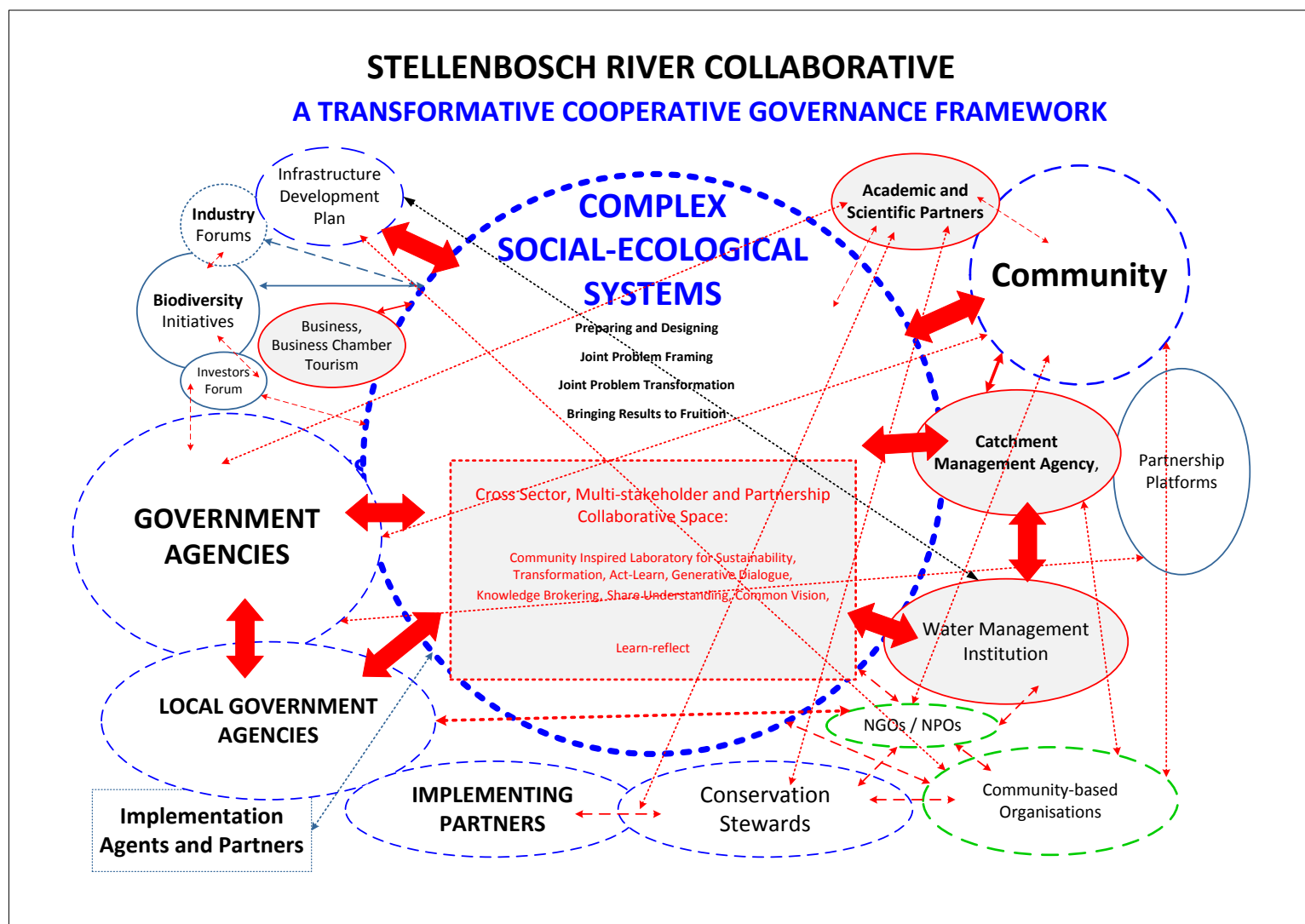
Figure 21 - A schematic representation of the SRC transformative collaborative governance network space

Source: Author's own compilation

6.7   CONCLUSION

In this chapter, I discussed the five phases that characterised the research journey. Using a first person narrative, I discussed how I situated myself as the main research instrument in a complex SES, that could no longer be dealt with in terms of top-down silos. I described the process of documenting and mediating the cross-sector, multi-stakeholder relationships in the ERC to establish multi-stakeholder relationships in a governance approach that emerged from a strong partnership network.

The focus here was not on my 'toolkit' that I have described in Chapter 4, but rather on my choice of progressively finer tools in order to document and understand the transition of the corporate actors involved. The events are qualified through my interventions and reflections.

I started with Scoping in Phase 1, marked by preliminary discussions with various stakeholders, observations at different formal events and platforms, and considering who the possible participants would be in my collaborative research approach. Highlighting the length of my research period, I discussed how the complex dynamics marked a mixing and weaving of the different activities that were involved in identifying the key stakeholders in Phase 2. I had to widen the horizon to reach out to industry, and work across barriers and obstacles to include more stakeholders for cooperative problem framing.

In Phase 3, my research process moved into taking action through multi-stakeholder collaboration. Identifying the stakeholders as a community of interest guided the process of transformative engagement and dialogue, to connect people and river to each other. In Phase 4, I described the learning journey and outcomes that moved the process to Phase 4. In phase 4, the process moved into building partnerships and creating a network as safe SES space where governance frameworks could interact in new ways.

Phase 5 marked the cross-sector collaboration in social-ecological systems that led to the launching of the Stellenbosch River Collaborative. As the network links strengthened, a governance framework could be established, developing a reflective enabling space with partnerships and funding for seed projects.

In Chapter 7, I will conclude, demonstrating how the SRC matured and functioned.

CHAPTER 7

TRANSFORMATIVE COLLABORATIVE GOVERNANCE FRAMEWORK FOR STAKEHOLDER RELATIONSHIP STRATEGIES IN SES

7.1   INTRODUCTION

In this chapter, I summarise and discuss my findings and outcome of this research. I review the essence of the problem, and present and discuss the TCG framework that I developed for SES stakeholder relationships. My research contributes towards a sustainable governance system the ERC in the Greater Stellenbosch Area. In this discussion, I will finally present the framework based on my findings as my process evolved over the phases, and introduce the outcome by discussing the journey in more detail.

Framing the commons as a biosphere-based understanding, I introduced the messy state of the world as the challenge to review the relationship between humanity and nature. Reframing the notion of sustainability in terms of a planetary stewardship context, the focus fall on how traditional governance responses disconnect human progress and economic growth from the biosphere and the life-supporting environment (Folke *et al.*, 2011: 720).

By reconnecting governance frameworks to the biosphere, governance frameworks need to be framed as a SES approach, which also implies a reconnection with complexity. I established that corporate governance definitions are too narrow to deal with the complexity of SESs, and that corporate governance is only one specific kind of stakeholder in the broader SESs perspective. Corporate governance frameworks do not accommodate the complexities of scales, levels of stakeholder interests, perspectives, and approaches involved.

With this realization, my focus of study shifted to how our responses fail or fall short to effectively deal with the problem of governing the commons. The only way to change the 'business-as-usual' strategies is to collaborate in ways we see fit to develop sound relationships and trust in order to combine resources to overcome the gaps in our

understanding created by fragmentation.

The polycentric governance system offered a viable solution. However, these systems comprise of the merging of many centres of decision-making (multiple governing authorities at differing scales) (Anderies & Janssen, 2012; Ostrom *et al.*, 1999; Ostrom 2009; 2010). These centres are formally independent of each other, but involved in competitive relationships or connected to each other in cooperative undertakings, or have recourse to central mechanisms to resolve conflicts, thus functioning as a system (Ostrom *et al.*, 1999; 2009; 2010; Ostrom & Cox, 2010).

However, these systems assume that the stakeholders involved enjoy legitimacy in each other's understanding, and it assumes that the stakeholders can and want to work with each other. Furthermore, polycentric governance systems are levelled at micro-situational contexts – which sometimes lead to improved performance SES, while others lead to failures (Ostrom, 2009). Both corporate governance structures and polycentric systems are top-down approaches that work well in homogeneous settings. Polycentric systems also do not reveal how stakeholders learn to work together, and develop sound relationships in SESs.

In Chapter 5, I discussed the Stellenbosch ERC pollution issues by showing how the corporate governance frame work is only one kind of framework that is present in the mix of governing relations when framed from a SES perspective. In this setting, stakeholders do not enjoy legitimacy in the other's regard. Dealing with the challenges for governing SES stakeholder relationships can only be justified when framing the problem of governing the commons from a SES perspective that views the notion of sustainability from a complex adaptive systems (CAS) approach.

I will now discuss the SRC as a bottom-up cross-sector TCG framework.

7.2   A TRANSFORMATIVE PLACE-BASED STUDY: REVIEWING THE PROBLEM

I now introduce the Stellenbosch River Collaborative (SRC) as a third response to deal with governing the problems of the commons. By framing the commons from a biosphere-based understanding of sustainability this governance response draws on SESs thinking cognizant of complexity for dealing with intractable sustainable development issues. I find the social innovation perspective of Biggs, Westley and Carpenter (2010) useful to justify the SRC as a transformative space for SES stakeholder relationships. Biggs *et al.* (2010) focus on ecosystem management and my research focuses on SES stakeholder relationship management. I use their social-innovation framework as an effective mirror to reflect on the

process of enabling a SES governance framework through a transformation of stakeholder relationships.

Similar to their observation, this research focuses on factors that promoted the emergence and adoption of adaptive, integrated, collaborative SES governance approaches in the ERC. By positioning my research as a PAR-TD approach, I was free to explore how different governance frameworks dealt with complexity, not only in ecosystems, but also in social systems.

The issues around pollution in the ERC became stuck in disconnect between opposing governance approaches. This discord damaged the relationships between the key stakeholders, strained by contested responsibilities, mandates and compliance matters from the different governance approaches and rom an operational point of view as well. Looking after the whole river system is a governance issue and should imply communal responsibility by all the stakeholders. However, the different governance frameworks worked against each other and the crisis of pollution escalated to a crisis of stakeholder relations.

In this case, the concept of sustainability and responsibility was filtered and directed from a fragmented understanding of systems that existed in silos, separated from each other. Attempts to deal with the messy reality that is part of the river pollution problem failed. Key stakeholders approached the issue unilaterally from a legislative understanding, in a concerted effort to contain the complexity of the issue. They treated both the river and the relations as outcomes in their governance approaches.

We needed a different way to get the governance structures to interact positively in this space from a SES understanding. However, first we had to overcome disconnect in the relationships and trust that remained tethered to fragmented perspectives and to technical understanding of governance approaches. Using the concept of governance as a technical power arrangement and decision making structure only, was not effective and current governance systems fell short. We needed a different approach to reframe the different perspectives in the ERC, and enable a shared SES perspective.

A social-innovation perspective allowed me to use an exploratory place-based approach to explore factors that may foster a shared SES governance perspective from a cross-sector multi-stakeholder approach. Using the pollution crisis as the impetus, I identified the key stakeholders who were locked in adverse relationships with each other. These relationships were marked by contestation and conflict over the mismanagement of the pollution. Linked in

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a disconnected network of competitive interests and strategies, these stakeholders dealt with the river pollution from wide ranging and differing perspectives of blame shifting.

7.3   A SES PERSPECTIVE ON GOVERNANCE APPROACHES FOR COMPLEX SYSTEM TRANSFORMATION

To move past this impasse, I engaged as bricoleur in a process of reframing cooperation as an opportunity for new beginnings. It involved a process of collaboration with the key stakeholders across sectors to establish a strong partnership network. Together we engaged in a process of navigating governance frameworks and institutional goals that could extend to fit the environmental challenges, and transform governance systems. This collaborative process became the catalytic relational turnaround strategy, making SES accessible as an enabling space where barriers were lowered to adopt and spread the novelty of a strengthening community of interest.

The process of collaboration was mediated through dialogue and meaningful interaction with each other and the river, to co-create an inclusive representative SES governance approach as illustrated in Figure 22 below.
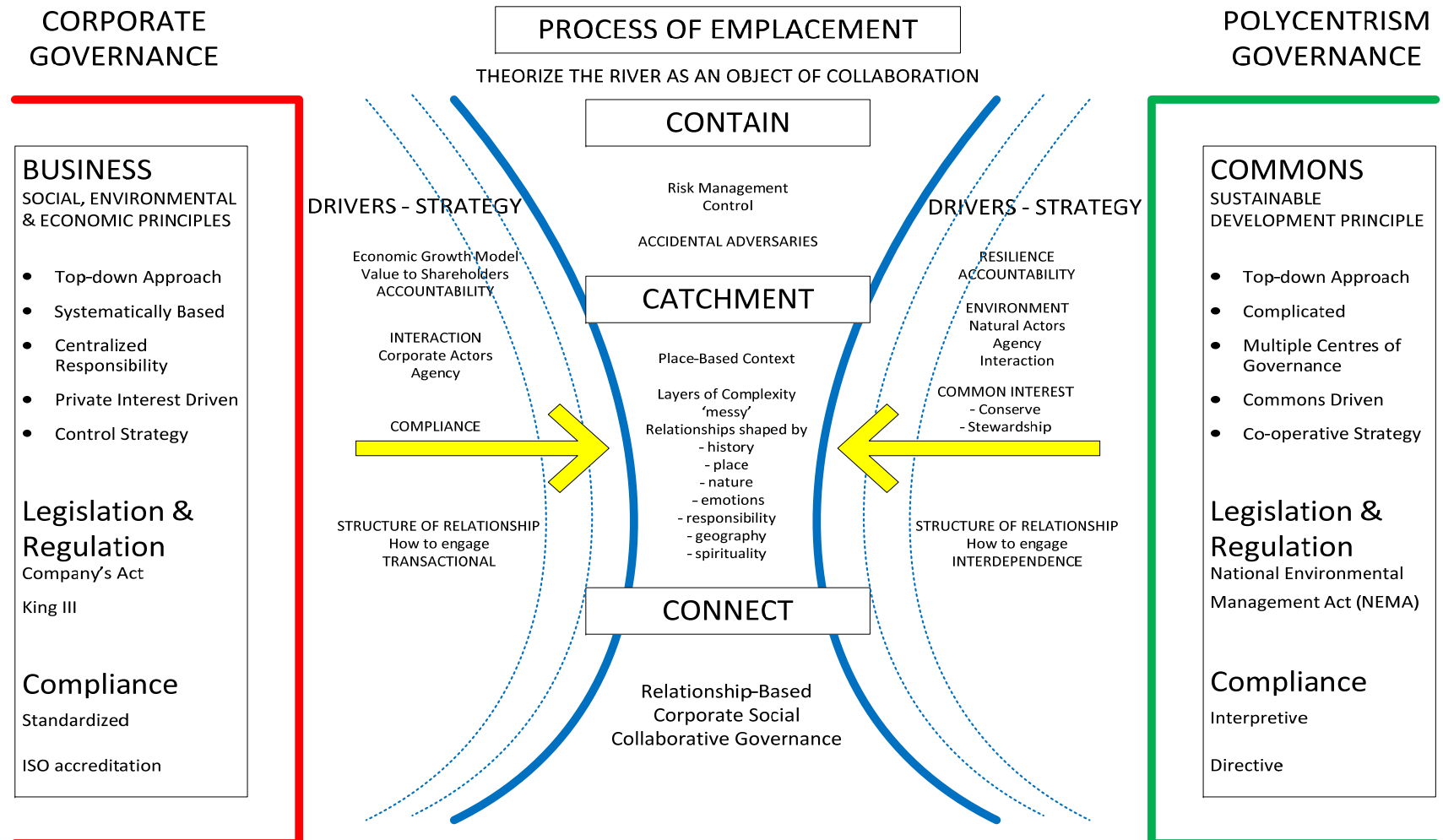
Figure 22 - Inductive theory-building suggesting a three-stage model of how corporate actors transition from transactional to transformative roles.

Source: Author's own compilation

Table 4 presents the TCG model, focusing on the three stages that emerged from the five phases process as the main insights drawn from the data. Summarising the insights and results interpretively, this model shows how the corporate actors shift from traditional to transformative governance. The TCG framework model is defined as a comprehensive set of relational agreements and commitments that voluntarily formed among stakeholders from different sectors that co-inhabit and co-depend on the same socio-ecological ecosystem. A full set of agreements is included in Appendix 5, page 183 and following.

This SES governance approach unfolds in the emerging three-stage model illustrated in Figure 22, and is a social innovation in itself. However, the theoretical contribution is the Transformative Governance Framework (TCG), with the three stages and their sequence illustrated in Table 4.

The central contribution of this dissertation is to put forth the idea that place itself, and focal natural objects like the river that have come to define the place itself, facilitates a voluntary, self-determined transition by corporate actors to participate in collaborative governance. The idea that place itself, and focal natural objects, facilitate such a transition contrasts to studies that require external interventions – exogenous shocks or events, pressures or incentives by independent institutions, or changes in social or moral norms to construct modes of emplacement and transitioning.

There is limited literature on how corporate actors manage this transition from a self-centric and single-minded interest in financial bottom-line to other-focused multi-sighted collaboration with multiple bottom-lines. Recent theory-building efforts suggest such transitions are typically intermediated – by conveners (Mair & Hehenberger, 2014), or third parties that authenticate intention, mitigate conflict or certify progression towards shared goals (Zietsma & Lawrence, 2010).

The emergence of local collaboration to preserve commons has been accepted for some time (Ostrom, 2009). Nonetheless, such local collaborations rarely involve heterogeneous, cross-sector actors, whose motivations, activities and periods tend to differ dramatically. However, while the possibility of cross-sector collaborations among such diverse actors has been documented for different commons, from climate change to health issues, we have yet to appreciate how place creates additional occasions for such collaborations.
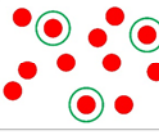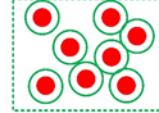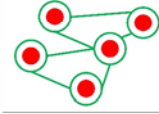
Corporate actors' roles and relationships are evolving both within specific commons they find themselves in (or choose to join), and as they may voluntarily sign up to socially construct commons around new resources that are being depleted. This is illustrated in the Equator Principles in the Financial Sector (The Equator Principles 2013), as well as important South African initiatives such as the National Business Initiative (National Business Initiative 1995);

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and the Social and Labour Plans in the Mining Sector (Revised Social and Labour Plan Guidelines 2010).

Table 4 presents the TCG model, focusing on the three stages that emerged from the five phases-process as the main insights extracted from the data. Encapsulating these insights and results interpretively, this model shows how the corporate actors shift from traditional to transformative governance. The TCG framework model is defined as a comprehensive set of relational agreements and commitments that voluntarily formed among stakeholders from different sectors that co-inhabit and co-depend on the same socio-ecological ecosystem. A full set of agreements is included in Appendix 5, page 183 and following.

The TCG model in Table 4 below elaborates and illustrates the three induced concepts with specific actions undertaken by the corporate actors (column 2) and by other stakeholders (column 3). The fourth and last column identifies the shifting meaning and role of the river itself, as the transition from traditional to transformative governance unfolds.

Table 4 - Transformative Collaborative Governance (TCG) model.

Process	Constructs	Specific Actions Observed		Meaning and Role of the River
	Models of Engagement	Corporate Actors	Other Stakeholders in the Commons	

Transition from Traditional Governance to Transformative Governance	**CONTAIN**
	
	Phase 1
	
	AND
	
	Phase 2
		1] Firm-centric governance.
		2] Financial returns.
		3] Profit principle.
		4] Compliance standardized, implicit value, private benefit.
		5] Inward orientation on shareholders.
		6] Transactional exchanges with stakeholders.
		
		7] Exploitative and self-preservative.
		8] Environmental risk management such as the river cleaning project and onsite waste treatment.
		
		9] Participate in public forums.
			1] Stakeholder-centric governance.
			2] Multiple bottom-lines.
			3] Well-being principle.
			4] Compliance interpretative, commons benefit.
			5] Public orientated. responsibilities
			6] Cooperative exchanges between stakeholders marked by:
			  a. Frustration with gaps between the different legislation; frameworks, difficult to implement;
			  b. Overlapping mandates confuse stakeholders;
			  c. High stakes and emotive-driven responses;
			  d. Meeting fatigue - too many meetings, poor follow-through.
			7] Commons.
			8] Sustainable Stellenbosch Initiative, REMF partnership.
			
			9] Public initiatives such as Adopt-a-River and partnership platforms such as BRIP and Langrug informal settlement (Franschoek) initiative.
				1] Natural object.
				2] Scientific bottom-lines.
				3] River health principle.
				4] Water quality standards - contain pollution approach.
				5] Conservation and Infrastructure.
				
				6] Interdependence between social and ecological systems.
				
				7] The river is making us sick.
				8] Contain river pollution problem.
				
				9] Rehabilitate the river.

	CATCHMENT Phase 3	1] Increasing participation in public water and catchment management agencies, and meetings. 2] Participate in the appreciative river walk. 3] Engaging in generative dialogue. 4] Relationship building with downstream and upstream neighbours.	1] Remove barriers to information and regular contact. 2] Participate in appreciative river walk. 3] Input and reports from specialists about the problem, involving DWS, DEA&DO, WWUA and SUWI. 4] Relational interaction with stakeholders.	1] River 'represents' many different interests - we all have upstream neighbours. 2] Connecting people with the river, seeing the System. 3] Collaborate to clean the river. 4] Identify with the river imperative to re-defining place.
	CONNECT Phase 4 AND Phase 5	1] Stakeholder-centric transformational governance mode. 2] Co-chair SRC, champion of NGO partner.	1] Notion of stewardship uptake. 2] Strong partnerships: WWF water-steward, key stakeholder for CMA, official SUWI project, Green Filter community laboratory, Enkanini Water Hustler eco-champions, research themes, champion system for different projects and initiatives, and WWF Green Trust funding.	1] Healing and reconnection - new relationships forged. 2] Collaborative emplaced with river.

Source: Author's own compilation

I will now discuss and interpret the TCG model and how the three stages emerge and unfold, revealing how a natural object – the river – intermediates the transition of corporate actors from traditional to transformative governance. Table 4 is an illustrative quote describing in a simple summary statement what going through that particular stage meant

for the corporate actor (column 2). It thus also demonstrates how corporate actors dealing with different types of commons in different places and at different time periods might recognize whether and how their governance approach and role are adapting to the SES.

The aim is to explain how the commons corporate actors inhabit may enable their progressive transformation from self-centred to societally- or environmentally-centred actors (Stephan *et al.*, 2016). These transitions happen organically as the relationships of different actors with the place keep evolving. The TCG model illustrates 'how' corporate actors shift from traditional modes of governance to transformative modes of governance in a sequence of the three stages – contain, catchment, and connect – in Figure 22 on page118. Tracking and identifying these three stages are the main insights drawn from the data and presents a social innovation in itself. Table 4 elaborates on the three punctuated stages of containment, catchment and connection for deeper insight in the practical realities involved, which may resonate with the realities in other but similar contexts such as the BRIP closer to this context.

The TCG model evolved around how every participant's recognition of complex interdependencies gradually grows from initial engagement to collaboration, to dealing with the problem of pollution of the river from their different governance frameworks, observing the transitioning of the corporate actor from a firm-centric to a multi-stakeholder centric governance approach.

The TCG model shows two groups of stakeholders involved in this research, juxtaposing firm-centric and stakeholder-centric approaches and revealing the tensions between the two perspectives of firm-centric and stakeholder-centric approaches. Corporate governance frameworks are institutions that constrain and guide what corporate actors do. They do not predetermine, however, the actions corporate actors could take. The corporate actor departs from a firm-centric approach to deal with the impact the pollution in the river has on the firm.

They respond from a corporate governance framework that is for purposes of this study merely considered a fixture of place and time, which periodically becomes updated. As explained, corporate actors triangulate their governance decisions with the frameworks in place, to fit with time-place combinations, and comply with set, often very strict, industry standards such as ISO accreditations. A good example is the King Code of Conduct, and its integrated reporting principles of the triple bottom-lines of social, environmental and economic considerations. The King Report has been periodically revised to incorporate the changing business environment and legislation framework for compliance, such as the Companies Act. At the time of this study, the King III report that provided the framework was updated to the King IV report.

A typical firm-centric approach adopts a top-down approach for decision-making and

implementing strategies to respond to the realities that affect the business operations and viability. Drivers of firm strategy and therefore accountability at board level typically hinges on economic growth models and value to shareholders. The concept of stewardship pertains to the board's responsibility in their agency as corporate actors to act in the best interest of the firm as a priority. Therefore, it is not unusual to hear corporate actors often explain that 'business is in business, for business'. The financial bottom-line remains priority and determines how corporate actors interact and engage with other stakeholders outside that equation. The structure of these engagements influences the relationships a corporate actor engage in, and is mostly of a transactional nature in line with the business interests and strategy. A good example is how to engage with other stakeholders in the commons to deal with the pollution issues of the river in Stellenbosch. Chapter 5 elaborates on these issues.

Responding to, and dealing with the issues of pollution, is strictly considered in a strategic sense mostly, to comply and manage the environmental impact on the corporate. Cooperation for sustainable development, and more specifically collaboration to preserve the commons creates a tension between the two perspectives (firm-centric and stakeholder-centric), as interests are different. Preservation of the commons may be of interest to the corporate, but it is not a business responsibility. Traditionally, it is a public concern for which the government is responsible to provide structures and legislation frameworks to guide and manage for the greater good. This requires a wider stakeholder-centric understanding and responsibility approached from a central governance framework and decision-making centers for the greater good in the commons.

Corporates have to make that shift to a multi stakeholder interest in a stakeholder-centric approach. This suggests a co-operative strategy to collaborate with the other stakeholders, and approaching governance from a multi-bottom line perspective and understanding. The polycentric governance framework enables collaboration between multiple decision-making centers, facilitated in a top-down fashion through government agencies, or through external interventions by funded third parties endorsed in a top-down government agency fashion, with a transactional compliance and directive perspective towards legislation and regulation frameworks such as NEMA. The drivers of compliance assume that greater accountability is fostered through a common interest in resilient environment. Although this study does not dwell on concepts such as conservation, agency and stewardship, it is important to acknowledge how the concepts of conservation and stewardship are important interpretations in stakeholder-centric perspectives. A natural object such as the river defines stakeholder identity and place, and how to understand interdependence and relationships in this context.

Process of emplacement: three punctuated stages to facilitating a voluntary, self-determined

transition by corporate actors to collaborative governance.

This process builds on the shifts in corporate attention from shareholders to stakeholders previously discussed by Kacperczyk (2009: 261). Chapter 2 proposes that recognition of a corporate actor's embeddedness within its local socio-ecological ecosystems will progressively shift attention from a dominant focus on financial returns to pursuing multiple bottom-lines. The multi-method induction reveals an eventually transformative role of place on the understanding and articulation of governance by corporate actors.

1] Stage 1: Contain

This stage involved the scoping and exploring of how Distell interprets shared issues of pollution in the river, identifies and recognizes the different stakeholders in this, and how to deal with managing challenges of shared resources in the commons. This marked the unique SES and place-based challenges that all decision makers faced in the ERC. Chapter 5 (see 5.3.1 on page 72) captures the context within which this research was initiated.

The first response, to contain risks and doubts, was a shared perspective by most of the stakeholders I approached. The negative impact of the pollution is systematically eroding the Stellenbosch brand. The river was messy and represented hurt that reflected in the way the stakeholders perceived its presence. I often thought that if some of these stakeholders who had property on the river could divorce themselves and move away from it, they would.

A practical example is how discussions evolved around measures to identify and contain the sources and levels of pollution, as blame casting goes back and fro between the municipality's demonstrated inability to deal with the reasons for the pollution, and the general apathy or even disinterest of corporate actors and other stakeholders in the community. I made use of this cross-blaming as a shared interest in who is to blame, to identify the key stakeholders and set up links between them with the aim to initiate cooperation between them to deal with the issues of pollution. In a sense, the corporate actors were forced to engage with stakeholders in conflict, in the commons, and around an issue that is difficult to incorporate in their governance framework.

The economic concern is a reality for both the multiple actors in the commons and the corporate actor, but for reasons that are more divergent and less uniting. The corporate actors did not feel it is within their scope or responsibility to deal with these issues in a community context, common resource management is a local government responsibility. They limited their responsibility to their compliance strategies within the legislation frameworks in place, and the projects they initiated to respond to their own challenges.

The corporate actors nominated their officials concerned with environmental sustainability and operations to collaborate on behalf of the company, in line with their understanding of compliance and social responsibility. The stakeholders agreed to collaborate to contain the problem of pollution, and the river was accepted as an object of collaboration. In general, it was in everyone's interest to contain the pollution sources. At this stage, the focus was more on the economic issues that relate to different visions and strategies for sustainability of Stellenbosch.

Containment of the problem was the chosen response for all the stakeholders. Initially, the stakeholders collaborated to contain the problem of pollution, managing the risks and doubts about outcomes with the different top-down formal mechanisms available. Here, the corporate actor has two sets of reference mechanisms to frame their responses in this collaboration from a compliance and code of conduct mode. Legislation frameworks guide how corporates and other stakeholders comply in terms of their impact on their environment, and Distell, like the other stakeholders such as the Stellenbosch Municipality, the WWUA, Spire, DWS, DEA&DP and Cape Nature make full use of these mechanisms to ensure compliance.

However, the primary nature of the corporate governance framework focuses on transacting with stakeholders and shareholders as set out in the King Code of Governance for a summary of the King III report), to represent and protect the investor interests in a firm-centric approach.

2] Stage 2: Catchment

Understanding how the collaboration came into this space, considered a buffer zone, between a firm centric and a stakeholder-centric perspective was more about bringing in a different form of governance. The buffer zone was kept empty, as all governance frameworks stopped at the buffer zone, also leaving the commons out of it. My research created an opportunity for all sorts of interests to penetrate the corporation like a virus, and as they came in, a reasonable response of corporates was to not like and understand this, as it has nothing to do with their responsibility, corporate governance, citizenship-it was 'forced' upon them.

The notion of collaboration was 'inserted' into the buffer zone-which I carried into this space in my different engagements. Initially it was a very reductionist view of the pollution problem; it was isolated. The blame was also a very nicely carved out management decision. Stakeholders were not trying to collaborate to restore the river or the relationships; they were only trying to contain the problem.

However, engagement and interaction with the other stakeholders in different ways brought a growing recognition by the corporate actors about what the river is and what the river does to themselves and too many other stakeholders started to change how they engaged with

the pollution and the other stakeholders. In the beginning, I brokered the different narratives and positions between the participating stakeholders. A good example of this was how a local farmer and senior executive of the WWUA stood up to the municipality in a 20-year conflict, exposing the issues of pollution in the media.

My explorative discussion with this stakeholder made a lasting impression on me. He was extremely angry with the municipality, and showed me the condition of the river after another WWTP overspill in the river. His property is the first property below the WTP, and he is frustrated with the increasing incidents and the pace at which the river quality is degraded by the pollution. He threatened to take drastic measures to force the municipality to deal with the reasons at their soonest. At that stage, he declared war, even if it means that the Stellenbosch brand and economy gets hurt. This not only amplified the municipality's inability to deal with the pollution issues, it also highlighted the municipality's dependence on its community for assistance and cooperation, in the face of an increasing threat to the Stellenbosch brand and economy. This story carried so much weight and authenticity that I shared it with the decision makers and influencers as genuine and real as I could. I had to make sure everyone understand the consequences, and that the time has arrived to engage with the reality of this potential threat.

Stakeholders such as the DWS, Cape Nature, DEA&DP, and the WWF grew more interested, especially in pursuit of the value to set up a space for various reasons. The BRIP enjoyed priority over the ERC as the smaller catchment, and the government agencies (DWS, DEA&DP, Cape Nature) welcomed and supported my initiative to initiate a collaborative platform for stakeholders to engage in with each other to collectively deal with the issues of pollutions. The possibility of solution/s and a settlement was attractive, too.

It was soon clear that the river is an icon for the region as awareness of the river as a natural system grew in the various discussions and different ways they engaged with each other and the river, and sharing stories – even consult with each other. In this process, they started to recognize fear of contamination that was not linked to the pollution, but as part of a central identity.

This highlighted a natural system with many stakeholders, all of who depend on what the definition of what the region is, and the relationships are. This brought in and linked the different progressive layers of the ecosystem. The river became socially constructed as a commons worth attending to and preserving for future generations, and interactions focused on how best to clean the river bring previously antagonistic stakeholders in conversations and collaborations.

Identifying with the river shifts the locus of cognition and emotion to the features of the place. The key to the catchment concept is indeed the reframing by each actor of their own role and responsibility relative to the river – not just yet to one another.

The stakeholders started to look at the river, not through the pollution but through their co-dependence on and co-habitation with the river. The river became a multi-layered object that progressed and becomes an actual natural ecological object with relational and spiritual connections. Looking at the object itself reduced the river to a pollution problem that was restored to an ecological commons, and eventually upgraded from beyond the natural object to one that has relational properties and spiritual properties.

A good example is a story that one of the corporate actors shared about his fond memories spending family time at the river as a child. He shared how him and his siblings use to picnic on Sundays at the river with their parents, swimming in the river and chasing fish. He also told about a Stellenbosch tradition to baptize babies with water collected from the river in town. The pollution in the river makes it impossible to go on with that tradition. People use to fish trout and see otters live and nest in the river, but has disappeared over time as the pollution increased. The river used to be a main attraction of Stellenbosch, but was diminished to a messy object.

The discovery was very different from the initial problem and research question, and went beyond that. It also became clear that recruiting and accepting the river as an object of collaboration actually happened because stakeholders wanted to collaborate, and not to solve the pollution problem particularly. The stakeholders needed an object to collaborate, and the river was the object through which they could learn how to collaborate – the river was a problem that could bring more collaborators together.

Once they started to look at the catchment, complexity started to become a pivotal concept that kept increasing up to a point where they saw the catchment and a SES. Seeing the catchment was a very important turning point where the stakeholders started to look differently at the river. A shift happened where the stakeholder view of the river moved from the messiness of pollution and hurt of relations to a healing river bringing together a community. Relations became important and interdependence received more emphasis, as the views of the river shifted to a sense of place and identity, healing relationships. The river emplaced the collaborative, as the idea of catchment puts the collaborative in place with a context linked to a SES, it gave the collaborative an identity through sense of place shared by all the stakeholders.

3] Stage 3: Connect

During this stage, a lot of connections started to happen as new relationships forged after the complexity brought healing through awareness, generative dialogue and meaningful interaction, as described in phases 4 and 5 of my research process. Identifying with the river connects previously conflicting stakeholders in a way that encourages and enables co-stewardship of the place they inhabit together. Over time, the unfolding of collaborative relations diffuses previous tensions among corporate actors and other stakeholders and promotes greater flexibility and reflexivity in how corporate actors govern themselves and how they revisit and revise their own role in governing the commons.

The collaboration eventually became a structure that never came into the corporate or the community, but bridged the space/disconnect between them. The collaborative created a conversation by legitimizing the river and the acknowledging a context to which all the stakeholders belong and depend upon.

A collaborative looked for a problem to solve, and as they engaged with the problem. The problem itself acknowledged the complexity and after this complexity was 'seen' and accepted new connections were forging in an emerging and non-linear fashion. Therefore, I cannot theorise this as corporate governance gone better, or claim a commons impact in corporate governance. Nevertheless, I do propose a conceptual framing of the process in a three-stage process that resulted in a new set of connections that formed after complexity that were not possible before it.

The collaborative came to being as a bridging organisation that was initially a placeholder in the buffer zone between firm-centric and stakeholder-centric perspectives that evolved into a system of connections that positions itself as critical connecter. Once this happened on the river, this system of connections no longer depends the on river but beyond the river as a place and SES. This system of ecological, relational and spiritual connections is not just about the river, but formed around the river and now go beyond.

It was important for the key stakeholders to understand how their governance approaches focused on achieving outcomes from a top-down silo environment from within their own institutions, as well as the disconnect between the organisations, treating the river as a messy object. Thread-rigid responses are normal when organisations such as the municipality are challenged and the DWS are called upon to intervene, but are less clear for the corporates in their attempts to contain the issue. These responses, driven from a rule-compliance departure as the main denominator, engaged from different perspectives. Polycentric governance

engaged the commons from a legislation structure, while the corporates engaged from a transactional understanding of sustainability.

The learning journey to the river gave agency to the river as a natural object and allowed us to theorise the river as the object for collaboration in the SES space, and in turn revealed the complexities of the catchment system. By taking action together, participating in in the river visit and subsequent generative dialogue, stakeholders engaged with the complexity of the issue as part of the catchment. Defences and rigidity were gradually lowered by sharing stories and opening up in the generative dialogue. Collective action emerged only after all the stakeholders moved past the complexity of the issue to discover new common ground in their shared concerns around the declining quality of the river.

Combined, these findings suggest that complexity played a critical role in restoring relationships. The process of knitting together the different perspectives and corporate strategies into a more cohesive network to cooperate in a bottom-up, cross-sector collaborative governance structure from a SES understanding, was generative because it gave all actors license to update and shift their positions.

Complexity was important to bring together the relevant key stakeholders and gradually link them through a relationship building process. My own understanding of complexity theory was central to resolving the issues, and recognition of complexity by the stakeholders helped to understand the inter-relationship of the elements of the river. Reconnecting to the biosphere enabled the restoration of complexity by establishing an understanding of responsibility of stakeholders in relation to each other and the river.

Every partaker's recognition of complex interdependencies increases in this second stage. Nevertheless, the key to the catchment concept is indeed the reframing by each actor of their own role and responsibility relative to the river – not just yet to one another. These findings suggest that collective action may require a certain level of complexity – without sufficient complexity stakeholders may become stuck into blame games.

Even those willing to act may be at a loss about how their actions could turn a bad situation around. The more intense the conflict became, the more the stakeholders tried to contain the issue, reducing its complexity to deal with it. Attempts to prematurely reduce or contain complexity intensified defensive stances, and made it harder for corporates to become a meaningful part of the SES space. The lower the complexity the higher the vulnerability of each stakeholder became. The loss of complexity gradually impairs collective action and may even break it down completely as it almost happened here.

The two critical turning points in my study were the reconnecting to complexity introduced by the catchment, and the resolution of the conflict between DWS and the Municipality amidst prosecution proceedings. Both events made the river an active player, serving as a boundary object that allowed stakeholders to share (and listen) to their own and each other's stories, and histories with the ERC.

Responsibility was constantly redefined, sometimes even radically so. Nevertheless, it was not a result of internal processes or corporate governance frameworks. Instead, the emerging understanding of responsibility was shared – stakeholders derived at their individual responsibilities in relation to the river, and all the other parties suffering from the crisis.

Understanding corporate governance as a process that required natural complexity contributed to the intersection between corporate governance and sustainability. The focus fell on SES as an enabling transformative space, open for constructive engagement where all perspectives from a governance point of view were represented, shared and included. The process mediated and facilitated reconnection to complexity and building partnerships, creating a network in SES space where governance frameworks could interact in new ways framed in the Stellenbosch River Collaborative (SRC). Connecting with the complexity allowed the stakeholders to frame the wicked problems of water governance as a complex SES and rediscover a common ground and a shared willingness to undertake collective action.

Framing governance perspectives in complex SES accommodated stakeholders to become more responsive to the seemingly intractability of the issues that prevented coordination of central governance and private initiatives to deal with the issues of pollution. Understanding increased gradually as stakeholders reconnected to the layers of complexity inherent in the nature of dynamic interactions that emerge from SES.

The Stellenbosch River Collaborative (SRC) now represents a SES space where different perspectives, experiences and understanding are enhanced in a cohesive bottom-up functioning network of stakeholders who are interested in and or affected by the river quality of the ERC. The forum is open to all Interested and Affected Parties (IAPs) wishing to take part, provide input or make a contribution towards the purpose of the SRC. Any stakeholder forum member who shows through their commitment and ability to influence a process that could assist the SRC to fulfil their purpose and mandate, could be invited to join the SRC.

7.4   THE STELLENBOSCH RIVER COLLABORATIVE (SRC)

The SRC organised around its developing network, linking key stakeholders through newly forged and repaired relationships. The SRC can be described as a collaborative of like-minded organisations and people who are all concerned about the deteriorating water quality of the rivers in the Eerste River Catchment. Accepting their responsibilities as stewards of this space, they co-developed a collaborative governance approach in dealing with the water quality issues and the environment in the catchment. The SRC provides an enabling platform and 'safe space' where the members hold the intention of a collaborative governance approach.

The SRC consciously and purposively strategizes, enables and creates free-flow of energy and access to shared learning, action and knowledge. Guided by this long-term view, the SRC commits to being an overarching and interactive group providing input and guidance about relevant projects, structures, and the processes for fulfilling its purpose. The SRC's motivational and constitutive role focuses on the identification and implementation of relevant catchment, specific projects which they investigate, and implement in a "learning by doing" approach that meets the action orientation of the group.

The SRC formulated and adopted a formal Terms of Reference (SRC TOR) that describe its purpose, mandate, composition and structure, functions and general responsibilities. The TOR also organizes its functions with guidelines for the chairmanship, secretariat, scheduling of, and procedure for meetings, including the order of business in these meetings. It ends with a code of conduct. The TOR is attached in Appendix 7 on page 214.

The SRC is an organic structure that shows its network and links to its three entities which should not be understood as a hierarchical structure. The steering committee (SRC-SC) and a broader stakeholder forum (SRC-SF) are the two main features, which is organized to bring all relevant stakeholders to this space, guided by the Steercom, consisting of the founder members – as illustrated in the SRC logo in Figure 23 below. The SRC structure in Figure 24 on page 140 (section 7.7 of chapter 7), shows a network with different links organised around the Steercom that acts as an enabling and organizing space for coordinating the collaborative partnerships and implementing partners.

The participating stakeholders and key partners collaborated with the formulation of the TOR (see Appendix 7 on page 214), which was adopted unanimously. The spirit within which the SRC originated is captured in its purpose statement:

The Stellenbosch River Collaborative (hereafter referred to as "SRC") is a collaborative of likeminded organisations and people concerned about the deteriorating water quality of the rivers in the Eerste River catchment. As stewards of this space, their aim is to develop a collaborative governance response to the water quality issues and the environment in the catchment. Guided by this long-term view, they will investigate and implement agreed actions and adopt a "learning by doing" approach to meet the action orientation of the group.

Figure 23 - Stellenbosch River Collaborative
Source: SRC Steercom

The SRC mandate communicates a collective commitment by its members:

The SRC will be an overarching and interactive group that will provide input and guidance into other projects, structures and processes that assist in fulfilling our purpose.

Over and above the influencing and consultative role, there will be a strong focus on the identification and implementation of relevant catchment specific projects

7.5   THE SRC STEERING COMMITTEE (SRC-SC)

The steering committee is a formal structure and consists of influencers and decision makers that strategically collaborate in fulfilling the SRC's purpose and mandate.

The Steering Committee (SC) at present consists of representatives of the listed founder members:

1] Spier Wine Farms,

2] Distell,

3] WWF-SA,

4] Stellenbosch University (Water Institute, USB, Sustainability Institute, School for Public Leadership, STIAS Center for studies in Complexity),

5] Stellenbosch Municipality (Department Engineering Services & Community Services),

6] Department of Water and Sanitation,

7] Department of Agriculture (Provincial),

8] Department of Environmental Affairs and Development Planning,

9] Cape Nature,

10] Wynland Water-Water User Association, and

11] De Zalze Home Owners Association.

The Chairperson and Co-Chairperson of the Steering Committee are elected by the Steering Committee, and hold office for a maximum of two years, after which a new Chairperson and Co-Chairperson has to be elected.

As researcher and founder member, I am coordinating the SRC, and managing the secretariat. I am a vital part of the SRC, and we all agreed that this will be the case for the foreseeable future. When we started out, I was asked if I would be committed to stay on after my research, which I confirmed. I also have a vested interest in the SRC, especially since it was possible to prove that stakeholders can overcome their differences, and collaborate to govern effectively in the SES. All the data I collated and summarized as part of my research is now SRC domain, and we have a common SRC Dropbox system organized in different files.

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It was clear that the participating stakeholders expected me to see this through, and stay part of the SRC. The SRC members all contribute resources in different ways to this space. Resources typically are time for meetings, networking, project management and intervention initiatives with implementing partners such as the non-profit organisations who are partners of the SRC. The partners contributed to fund the logo and banners that were designed as a collaborative.

The WWF-Nedbank Green trust funding project started end of 2014, and ends later in 2016, after which the SRC will have to find funding again. The WWF focuses on intervention and implementation projects, and it is unlikely that the secretariat will be funded again. The SRC and its secretariat is established, and my research for this part is complete. The seed projects are all up and running, to which I made a big contribution as a funding associate of the non-profit organization I nominated as partner in this space. This NPO also benefitted hugely from the partnership, and is now well established in the ERC.

The SRC adopted a champion system to coordinate and support intervention and other projects. It is my role to coordinate the champions and keep on building and nurturing relationships, while reaching out to stakeholders who are interested in participating in the SRC. The Secretariat supports the SRC Steering committee activities in various ways, which can be seen in the SRC Terms of reference attached. Furthermore, I liaise and interact with different forums and interested parties, and manage the multi-direction communication and information flow. I regularly meet with the chairs to ensure feedback and make decisions in consultation with the SC members.

7.6   THE SRC STAKEHOLDER FORUM (SRC-SF)

The stakeholder forum is a broader grouping of stakeholders that are interested in and/or affected by the water quality of the Eerste River Catchment. This forum is open to all Interested and Affected Partners (IAP), wishing to take part, provide input or make a contribution towards the purpose of the SRC. Any stakeholder forum member who shows through their commitment an ability to influence a process that could assist the SRC to fulfill its purpose and mandate, can be invited to join the SRC-Steercom (SC). This forum will meet quarterly to provide insight and expertise and update on progress towards agreed goals and processes.

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7.6.1 The agreed SRC-SC functions and responsibilities

1] Implement our mandate by or through the identification of processes, projects or structures whereby which we could collaborate to assist us in fulfilling our purpose. i.e. CMA development, IIC and Berg River Partnership;

2] The SRC-SC will identify a responsible person to represent it at the identified process, project or structures;

3] Identify priority areas for river rehabilitation, restoration and water quality improvement within the catchment;

4] Identify and develop implementation projects/opportunities on management of river rehabilitation programmes;

5] Manage and direct the activities of the secretariat;

6] Guide implementation or project agents i.e. Living Lands, Wildlands Conservation Trust and others in line with the purpose and mandate of the SRC as well as within the framework of any formal third part agreements; and

7] Source funding to fulfil the mandate.

7.6.2 Expectation of the SRC-SC members

1] Be a custodian of the rivers;

2] To participate equally with the other SRC-SC members in the execution of the mandate of the SRC-SC;

3] Act in good faith, and be constructive in their participation in the activities and discussion of the SRC-SC;

4] Afford all members an equal opportunity to raise and discuss issues;

5] Reach decisions by consensus;

6] Support decision reached and recommend that their institutions support the execution of decisions adopted at meetings understanding that a decision taken at the SRC-SC is not binding on the represented institutions;

7] Instill and promote good governance practices promoting sound financial and operational management through its transparency, participation, responsiveness, oversight, and accountability;

8] Keep a level of confidentiality of matters discussed, and respect requests for complete confidentiality on matters to remain amongst member institutions;

9] Attend meetings of the SRC-SC, however, in the event that members are unable to attend, they are to tender their apologies or allow for a representative to attend through a notice to the secretariat of the SRC-SC;

10] Provide relevant information required/requested by the SRC-SC accurately and timeously;

11] Give regular feedback to the institutions being represented on the activities of the SRC-SC.

The SRC is the result of cross-sector collaborative governance. By framing an enabling SES space, it became possible for multiple decision makers and influencers to interact positively and cohesively from their different governance systems to collectively deal with the water pollution issues. The SRC can be summarized as follows in Table 5:

Table 5 - Summary of the SRC role

Roles	Description
SRC	The SRC has a Cross-Sector Collaborative Governance structure, based on a strong network represented by stakeholders from different levels in different governance systems. The SRC influence is expanding. The Stellenbosch Municipality signed off a council resolution to partner with the SRC in its official capacity.
Influence	The SRC has a bottom-up network-like flow, which is strongly embedded in the relationships and trust between the decision makers and influencers in their different agencies. The SRC-SF is open for a broad-based inclusiveness, where issues and innovative solutions are communicated and investigated. The SRC-SC is the enabling space where the decision-makers and institutional agents collaborate to remove and overcome obstacles and barriers, to champion initiatives from a formal endorsement base. Examples of this influence: 1] The Stellenbosch Municipal Council signed a resolution to officially partner with the SRC, 2] The Municipality River Steward Partners platform, 3] Working with non-profit organisations, 4] Official WWF water steward initiative,

	5] Collaborating with Duzi- uMngeni Conservation Trust (DUCT) on learning journeys and community environment programs, 6] Launched the Stellenbosch Schools River Stewardship program, and 7] A key partner in the national DWS classification and resource quality objectives program.
Approach	By framing this collaborative in the SES space, stakeholders are now more open and responsive to deal with the complexity-based issues from a solutions approach. The focus is now on seeing and understanding the system, as well as how they can assist other stakeholders to collectively deal with complex issues in a holistic way.
Scale	Cross-sector multi-stakeholder participation that is now collaborating with national, provincial, regional and local partners across sectors.
Decision makers	Shared interests in healthy rivers and relationships in the ERC.
Stakeholders	An inclusive, relational and partnership approach to learning and change.

Source: Author's own compilation

7.7   THE SRC: A BRIDGING ORGANISATION

The TCG framework contributes to the growing literature on sustainability transitions (Hamman & April, 2013). When I started with this research I did not know what the outcome would be, but I did frame it as a collaborative process to govern SES stakeholder relationships, of which the SRC is the specific outcome of this approach that correlates with similar initiatives locally and internationally (Biggs *et al.,* 2010).

Hamman and April's (2013) collaborative intermediary organization (CIO) serves as a broad theoretical construct that was developed in the same region, which I use to reflect upon my process and the SRC outcome as a TCG structure. Inequality and power differences make for an intriguing context to design governance arrangements differently (Hamman & April, 2013: 13) and the SRC is not different. They summarise the most important CIO characteristics as follows:

1] The role of scale that determines the kind of collaboration and participatory governance processes;

2] Existing links between sustainability transitions literature, and the governance literature where governance focus on issues of legitimisation in cross-sector collaboration; and

3] Emphasis on the role of CIOs as active agents in translating and manifesting the vison of a purposive transition suggesting a wide variety of organisations, ranging from government agencies to lobbyist, that can play that role. CIOs are a more particular type of organisation, which explicitly involves key stakeholders in structured forms of deliberation, which is likely to play a particularly important role in sustainability transitions.

Hamman and April (2013) discuss two case studies as initiatives that take the form of cross-sector social partnerships, and identify effectiveness and legitimacy as two evaluative criteria to measure "success" (Hamman & April, 2013: 16). The SRC can be evaluated against these criteria.

Table 6 on page 139 illustrates how the SRC emerged from a transformative process on local scale, and the focus was on transforming stakeholder relationships with the TCG process. The SRC was mediated by myself as a social entrepreneur, and my use of the river and role of place correlates with the role of CIOs.

I facilitated and intermediated as an active agent, and through the PAR-TD process I brokered stories, and validated these stories in the SES context. Once these stories legitimized the different power-based stakeholders on an equal footing, facing the same issues, I could start to broker the connectedness that eventually transformed stronger stakeholders.

 The stakeholders themselves became active agents in translating and manifesting the vision of purposive transformation, in the TCG process. The stakeholders accepted responsibilities in their different agency roles, which grounded their legitimacy in the SRC as a SES stakeholder relationship governance space.

 The SRC is an enabling space shared by stakeholders who holds the same vision and purpose. To summarise, Table 6 following on page 139 and Figure 24 following on page 140 show the levels of interaction and scale of collaboration.

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Table 6 - Summary of the different frameworks and assumptions between the three approaches framed in SES

Assumptions	King III	Polycentric Governance	TCG
Influence	Top-down, limited, risk containment	Formalised process of engagement, many centres of decision-making linked to function as a system	Bottom-up, cross-sectoral, governance systems linked to SES
Approach	Systematically based	Complicated, micro-settings, homogeneous	Complexity-based, heterogeneous
Scale	One kind of framework in the mix of governing relations, homogenous	Multiple government centres or mechanisms	Cross-sector Multi-stakeholder consensus; Shared interests
Decision-maker	Central, formal	Cooperativity	Bottom-up, Inclusive, relational approach
Stakeholders	Private interest Control, Business oriented corporate sustainability reporting	Formal stakeholder institutions related to the commons	SES Stakeholder relationships, biosphere-based

Source: Author's own compilation

140
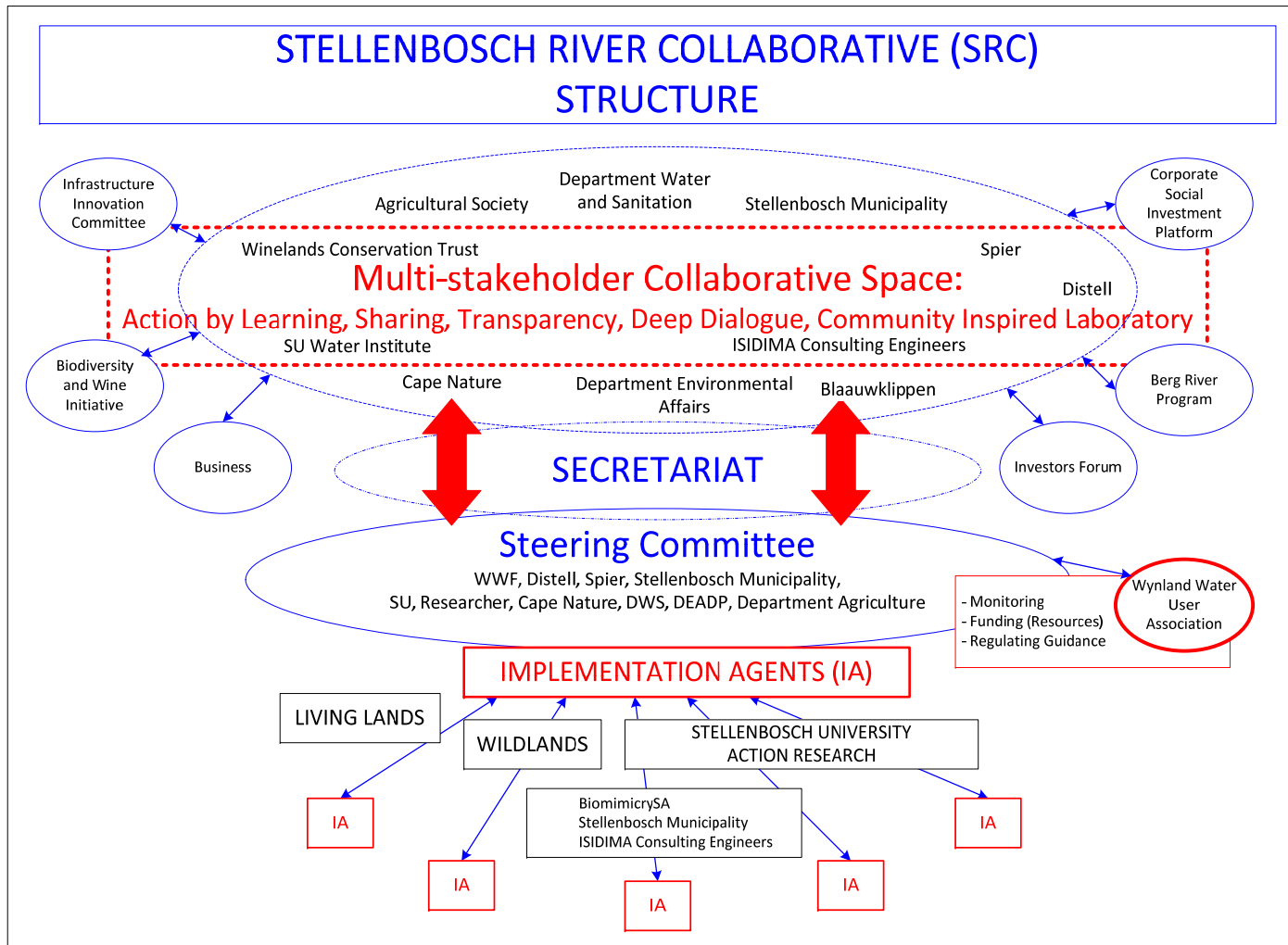
Figure 24 - A schematic illustration of the current Stellenbosch River Collaborative (SRC) network

Source: Author's own compilation

7.8   IN CONCLUSION

To summarise, the SRC now acts as a bridging organisation that transform the multi-stakeholders engagement in an enabling SES governance framework by:

1] promoting active engagement and dialogue between the major stakeholders in the catchment;

2] providing a forum where a common vision and goals for the river were developed and agreed upon; and

3] providing an impetus for developing and implementing activities to realise this vision (Biggs *et al.*, 2010).

Biggs *et al.* (2010: 7) explain that bridging organisations "link actors at different levels and thereby facilitate inter-organisational collaboration between, for example, government agencies, non-governmental agencies, businesses, and community groups." The SRC was established to address pollution in the ERC. In this process, the impact of fragmentary governance frameworks are now approached through coordinated and cooperative decision-making to integrate intervention strategies and action in the ERC.

The SRC is an enabling space with a flexible and adaptive responsiveness to stakeholder interests. The have had a significant impact in terms of improving and repairing relations, to the extent that coordinated actions are now attracting interest and other stakeholders. The SRC's domain of influence started local in scale, but has escalated to provincial and national scale, with its official status as WWF-SA water steward that enjoys national interest. The SRC is also a DWS Regional Catchment Management (RMC) partner among many more exciting developments.

My role as researcher was redefined as that of a social entrepreneur. I recognised a social problem and used entrepreneurial principles to organize, create, and manage an initiative to bring about social change (Leadbeater 1997, Bornstein 2004).

Social entrepreneurship was a critical element in the development of new management approaches in all three case studies, supporting a large body of existing work on the importance of leadership and entrepreneurship in transformation (Born & Genskow, 2001; Folke *et al.*, 2005; Olsson *et al.*, 2006, Westley *et al.*, 2006).

Biggs *et al.* (2010: 15) explain social entrepreneurship have the following important roles: (1) reframing perspectives, especially by providing or facilitating the development of an alternative

vision for ecosystem management, (2) engaging key stakeholders by fostering a group identity and building networks, and (3) managing conflict. These functions were often performed by the same individual but in some cases were dispersed across several individuals."

CHAPTER 8

CONCLUSION

8.1   OVERVIEW AND SUMMARY OF THE DISSERTATION

This dissertation addresses the persistent challenge of "governing the commons" through a place-base inquiry. A four-year auto-ethnographic participant action research reveals how corporate actors gradually reframe their role from economically motivated exploiters to forward-oriented and collaborative stewards of commons. The inductive theory building starts from recent calls for broader, more sustainable (Walls *et al*, 2012) and more place-based (Kennedy & Whiteman, 2016) governance. It corroborates recent insights that commons are socially constructed (Ansari *et al.*, 2013), and can be deliberately convened by corporate actors (Mair & Hehenberger, 2014) by showing that they are actively engaged in place, with prior and emerging stakeholders.

The findings go before and beyond the social construction of commons to more fully theorize the role of place, by specifying the nuanced role of natural objects in constraining and directing interactions among stakeholders. The findings also offer important lessons for corporate actors willing to comply with different responsibility and sustainability frameworks, but stuck in transactional modes of governance. This pits their economic priorities against other stakeholders and perpetuate overt conflict and continued depletion of common pool resources. I elaborate further on the theoretical and the practical contributions after sharing personal reflections from my research journey.

8.2   PERSONAL REFLECTIONS

The four-year process was scattered by multiple methodological turns, theoretical discoveries and personal growth. To prepare myself to comprehend the complex and dynamic nature of the interactions that I set out to observe, I engaged in autobiographical reflections, which I periodically documented, presented, and challenged to arrive at newer or deeper insights. In this process I developed my own voice as a pragmatic and reflexive action researcher, and created my personal place in order to continue to serve the eco-system I facilitated and witnessed unfold.

In Part I, I juxtaposed the current science on corporate governance with the templates that guide action – that is, the corporate frameworks that promote responsibility and sustainability. I combined classics with the most recent systematic reviews to bring out hidden assumptions. One revelation was the limited attention given to place and to natural objects: despite their centrality within commons, and the damage incurred, there are few arguments about whether or how these natural objects may shift attention, provoke sense making or offer alternative frames. Of course, some earlier work – such as Gail Whiteman's ethnographies (Whiteman & Cooper, 2000 and 2006) – displays unique relationships between specific stakeholders and natural objects and suggests how outsiders or strangers may come to understand these relationships. However, the role of place is conspicuously missing in the stakeholder literature, and recent introduction of place-based theorizing in organization studies (Lawrence & Dover, 2015) suggest that place can play different roles over time. By immersing myself in my own relationship with the river, and facilitating the unfolding of relationship by multiple stakeholders both separately and together, I developed a very granular understanding of how place matter. To capture it fully, I constructed my own methodological toolkit.

To get at the unfolding role of place in Part II, I went through several iterations in methodology and multiple steps in collecting and analysing the data. Once I immersed myself in the setting and gained confidence in my ability to navigate a collaborative, integrative and recursive process, I realized that I am becoming a research tool and started to document the steps I was taking in my role as bricoleur, mediator and facilitator. I combined auto-ethnography and participatory action research (PAR) – working back and forth through my own first-hand experiences of what was going on at a time, and my reflexive understanding of why it mattered.

By being an embedded researcher, I could combine my ethnographic data gathering method with a PAR approach that aligned well with what Van Breda and Swilling (2016) call Track II and Track III TD modalities. I used reflective and collaborative methods to provoke the participating stakeholders into a collective explorative review of their responsibility for their actions in day-to-day life, and to consider how to change their actions. I engaged in an informal relationship building process with the stakeholders to collaborate for better communication, understanding and exchange of information and explore their relationships with each other. During this process, I facilitated and mediated an intervention in such a way as to introduce a governance approach that emerged from a bottom-up process of participation with and between the multiple stakeholders across sectors.

There was a great deal at stake for those involved in dealing with shared water use in the ERC area. Therefore, it was not possible to begin with an over-structured research design, and thus I relied on the emergent dynamics of the process to guide my interactions and activities.

Framing the research as a TD place-based study, allowed me to mirror the uniqueness of this context authentically, and to organise my research as a common learning and reflexive process that involved both the researcher and the stakeholders alike (Pohl & Hadorn, 2008). Retrospectively, I could identify five distinct phases that emerged in relation to how I managed to make sense of the relationships and dynamics that connected and marked the stakeholder interactions related to shared water use in the ERC.

In Part III, I discussed how the research process unfolded from a loose network of role players to an established network of participating stakeholders, through reconnecting with complexity in the catchment area. The TD process allowed collaboration to translate a messy river in a complex catchment area as object for collaboration. My role was critical in introducing the stakeholders to this complexity to find a common ground for everybody, and in the end, it was not the river that created the collaborative, but the collaborative that created the river as a connective objective.

The process of reconnection between the stakeholders and between the stakeholders and the river was only possible after the river had been reframed as a healer of communities, and this was only possible after a certain degree of complexity had been reached. Connectedness is a key concept emerging from the data. A system of connections formed around the river and governance could go beyond the reasons why relationships broke up or could not be forged. The connectedness stabilised the commons temporarily by allowing more committed and engaged collaboration by each and every actor.

The river progressed from an object of containment that blocked complexity and governance systems from interacting positively in the SES, to that of a catchment area that allowed for complexity. Meaning started to occur, allowing connections with and around the river to become an opportunity to use the river as epistemic object to manage a system of connections in a cross-sector collaborative governance process at a transformative dimension. This transformative journey can be visually summarized as follows in Figure 25 on page 146.
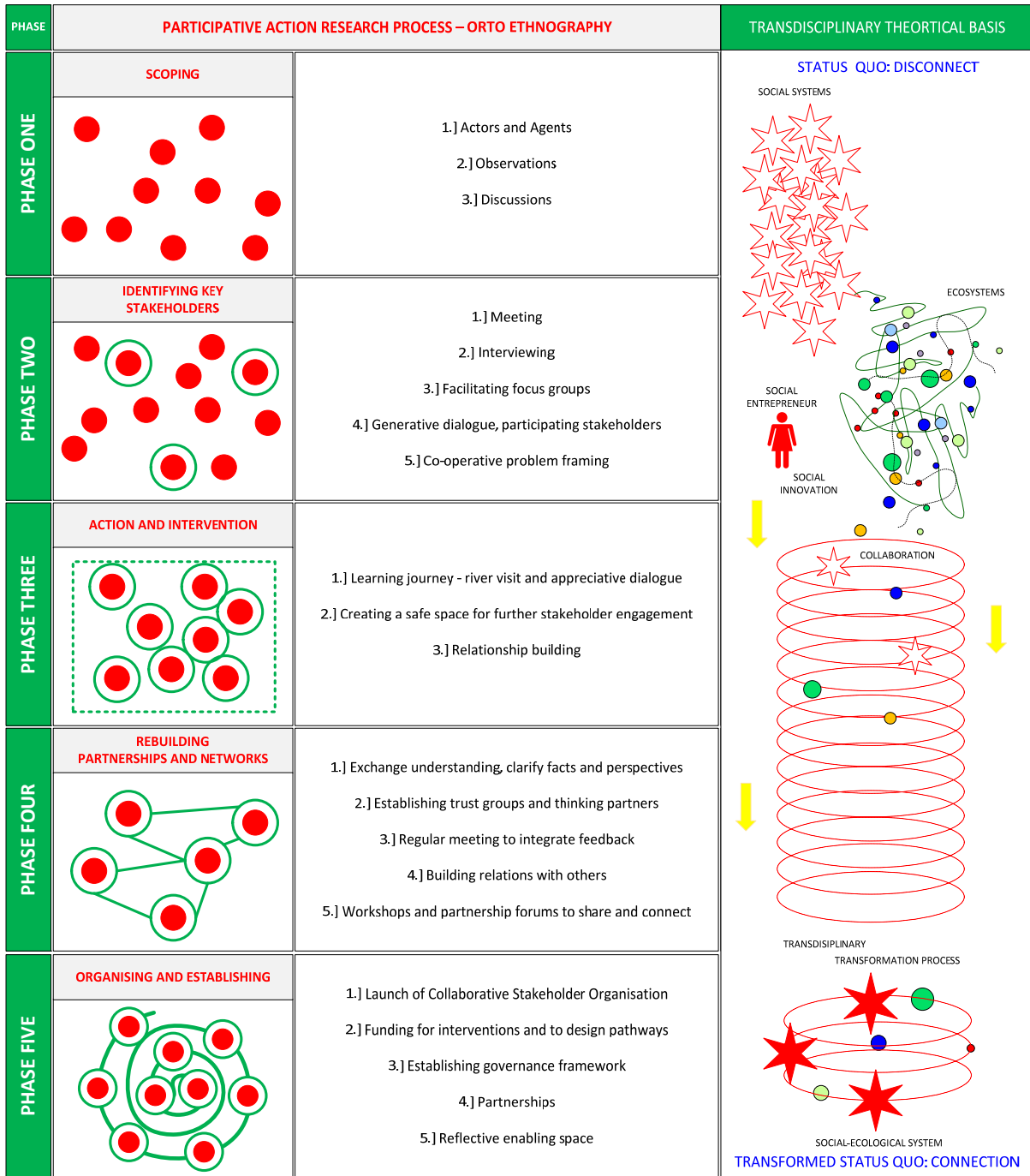
Figure 25 - The transformative journey

Source: Author's own compilation

8.3   CONTRIBUTIONS TO THEORY

I commenced this dissertation with a practical agenda, as a change maker vested in making a difference, in a place I cared for. I ended this dissertation with a theoretical revelation and a strong research program that I hope will reclaim the importance of place within and beyond the growing intersection of corporate governance and sustainability literatures.

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The well-defined contribution concerns a three-stage model of how corporate actors transition from transactional to transformative roles. Such transitions have been documented, but are often triggered by crises, ranging from accidents to regulations and stakeholder activism. Revealing how change can happen endogenously and relationally – in the absence of external triggers and without threats or incentives – is important, because it suggests that corporate actors are not intrinsically transactional but rather remain so when they lack any opportunities to engage with the commons they inhibit. Given the global effort invested in developing governance framework, the finding that even in cases when actors already subscribe to the most advanced frameworks, they often resist change is sobering. This means that structural and institutional changes stop far short of what corporate actors can and may want to accomplish. Put differently, we may have inadvertently given private actors a bad rap instead of carving out opportunities for meaningful transformation.

Beyond the contribution to the intersection of corporate governance and sustainability, the dissertation brings out the possibilities of theorizing place more broadly in other aspects of the tragedy of the commons and in the framing and resolution of wicked problems. These fall beyond the scope of the dissertation. However there are several important ideas that I believe can enliven and broader the stakeholder literature. For example, specifying the variety of natural objects and their interaction with time horizons (past memories, future projections) comes out vividly in my data. Stakeholder engagement theories can begin to explore how making such natural objects more accessible may deepen or broaden sense making or enable different types of work (institutional, relational, and moral). I also believe that the recent adoption of place in institutional theories (Lawrence & Dover, 2015) establishes place as an active co-participant in change making and therefore encourages us to be more open and more reflective to the role place itself plays in our implicit and explicit theories of change. This dissertation suggested that place worked differently at different times and for different stakeholders, but it predictably played three distinct roles. Building on these insights I believe we are just beginning to learn how place matters, and theorize it more richly going forward.

The main objective of the thesis has been to develop theory. The theoretical insights derived from the data hinge on the specifics of the intervention itself and therefore cannot – and ought not – to be generalized to other settings. What the actors here have done, and the outcomes of their actions, are likely to differ in other places and for other natural objects. What does carry forward however is the realization that corporate actors can transition by their own will and at their own pace from traditional to transformative governance.

They are also more likely to do so when they recognize their embeddedness within a place – because accepting their interactions with natural objects like a river reveals deeper and

multifaceted interdependencies with stakeholders inhabiting the same socio-ecological system. While this realization itself will vary significantly depending on the object, e.g. a forest will be quite different from a river (Zietsma & Lawrence, 2010) or a prairie (Whiteman & Cooper, 2000; 2006), what transcends the data and the context is an understanding of specifically how actors come to this realization. Chapter 7 elaborates on the three punctuated stages of containment, catchment and connection.

The practical lessons made available to other corporate actors revolve around how place facilitates the transition from traditional to transformative governance. First by containing risks and doubts; second by shifting the locus of cognition and emotion to features of the place, and attending to natural objects such as a river, forest or prairie; and third by connecting previously conflicting actors in a way that encourages and enables co-stewardship of the place they inhabit together.

8.4   CONTRIBUTIONS TO METHODOLOGY

The transdisciplinary methodology directed my inquiry early on towards a transitional question, motivated to me reach out, and bring together scientific knowledge and ways of knowing specific to actors living, working and playing in the Stellenbosch space.

Transdisciplinary research is vital and has been explicitly called for in order to study the commons, and specifically the role of organizations in repairing, restoring and protecting the commons (Howard-Grenville, Buckle, Hoskins, and George, 2014). There is also precedent for the combination of auto-ethnography and participatory action research (Whiteman & Cooper, 2000; 2006). Studies that take us to the 'front-line' of commons remain under-represented, despite being timely, relevant and rigorous (Whiteman, Williams, Kennedy, Hill Clarvis, 2015) and directly applicable to water as a commons (Kennedy & Whiteman, 2016) and to the role of place in governing the commons (Guthey, Whiteman, Elmes, 2014).

Because my research questions focused on the corporate actors and their own transition from transactional to transformative governance, I distilled several lessons for the protagonists I studied and those engaging similar issues in other places (Kennedy & Whiteman, 2016). I then discuss broader implications to other stakeholders, commons or collaborations to solve other wicked issues.

The three-stage process (containment, catchment and connection) provides corporate actors with a road map and a series of practices they can use to reassess and readjust their relationships with relevant features of the place. In this inquiry, the focal referent was a natural

object – the river, and my findings suggest that restoring the relationship between corporate actors and the place they inhabit is a good starting point. Stakeholder relationships are often adversarial and while relational work can sometimes move prior enemies closer to cooperation (Sytsma & Lawrence, 2010). Spatial work can often accelerate this process (Kennedy & Whiteman, 2016). The three processes that I describe, define and illustrate worked for multiple corporate actors and for other stakeholders. What is particularly noteworthy is that these processes worked at the height of the controversy and they worked despite a clear breakdown in relationships. This suggests that spatial work can complement, precede and even prepare conflicting stakeholders for subsequent relational work.

Second, for all stakeholders and for any facilitators of stakeholder engagement processes, this dissertation makes clear that place and natural objects are not just takers of collective action but rather makers and shapers of social interactions. Simply put, the place is an interactive participant in its demise and its remediation. When natural objects remain hidden or isolated, they are being denied their natural force. When they are being made visible, they surface different kinds of memories and enable different types of sense making. They broaden what actors see and what they deem relevant. Not engaging with place misses the full range of possibilities for relational work. Leveraging place can accelerate change.

Third, most commons are place-based. Whether local (Hahn, Olsson, Folke & Johansson, 2006; Olsson, Folke & Hahn, 2004; Westley, Tjornbo, Schultz, Olsson, Folke, Grona, Bodin, 2013) or global (Howard-Grenville *et al.*, 2014), commons are rife with spatial elements and natural objects. Bringing these to the fore can provide additional levers to manage with commons. Even commons that are global have specific place-based manifestations, such as causes or consequences.

Fourth and last, wicked issues may benefit from more attention to spatial and natural elements. These tend to be evocative by bringing out disclosure, and interactive, as they facilitate new forms of working with one another. Therefore, socially constructivist accounts of the commons and social innovation theories about how social actors tackle wicked issues can be enriched by attention to fine-grained objects and details. While there has been significant research on boundary objects in general and their role in collaboration more specifically, we are just beginning to explore how features of the physical space and natural objects can change or catalyse sense making (Whiteman & Cooper, 2000; 2006).

8.5   CONTRIBUTION IN PRACTICE

Following a transdisciplinary approach, a strong emphasis fell on engaging a real-world problem. A most tangible impact was achieved within the life cycle of the study, demonstrated with the leap from interrogating principles of corporate governance to facilitating self-organisation of a multi-stakeholder governance intervention.

The SRC is an established space demonstrated in the following achievements:

1] A formal partner of the Stellenbosch Municipality in initiatives such as the River Steward Partnership that was developed in a consultative mode within the SRC space and network to mobilise buy-in and commitment from the community

2] One of the WWF-SA water stewards and recognised as unique example and benchmark to other similar contexts nationally

3] One of ten key research projects of the Stellenbosch University Water Institute (SUWI)

4] A key partner in the prototype DWS Breederivier-Olifants' Catchment Management Agency (CMA)

5] An important space to initiate, coordinate and incubate projects such as the Green Filter project

6] The Stellenbosch Schools' River project.

The results from the study emerged from many observations within a place-based/context-specific study, the findings by definition novel. The generic insights related to conducting transdisciplinary research as well as the new model for governing a common pool resource makes valuable contributions to the respective fields of study.

8.6   SHORTCOMINGS AND LESSONS

This dissertation spanned over 42 months. There were multiple institutional challenges and limited institutional support. The process of scoping and approaching the right stakeholders was time-consuming and at times personally not just professionally challenging. Following the TD research route for my PhD study was a hard, enriching journey with many risks and difficulties. A compounding factor is that many institutions, including universities, simply do not understand how to support transdisciplinary researchers.

Support and funding is a big issue in TD research. I often felt overwhelmed and challenged, and financially constrained. I had to make a choice between working for an income, or commit to my research fulltime. I eventually sold my property to survive financially, and was fortunate

to secure a two-year study bursary for my research expenses at the University of Stellenbosch Business School (USB) where I was registered as a PhD candidate. However, I had to live off the proceedings raised from selling my property, my only 'pension'.

I had to fend off multiple attempts to hijack or even shut down the process. Founding the SRC attracted much attention and interest, especially from the government agencies, non-government organisations (NGOs) and non-profit organisations (NPOs). I was extremely fortunate to gain the support of WWF-SA for the SRC, and to complete my research WWF-Nedbank Green Trust funding in partnership with a non-profit organisation (NPO).). I was encouraged by a WWF executive to find a NPO or NGO I could collaborate with for funding, and we successfully submitted a proposal based on the SRC positioning and stewardship role in the ERC. The Green Trust fund is awarded to non-government organisations (NGOs) and non-profit organisations (NPOs) only, I could not submit the proposal in my capacity as researcher. This secured my financial predicament to outlast this research, but I was not prepared for the dynamics this unleashed. I can write another dissertation on NGO/NPO funding, which I probably will follow through in articles. It proved to be a bittersweet experience, and I resonate well with Belinda Kruiper's observation that NGOs take on a live of their own (Tomaselli 2013: 168).

I also had to navigate a meandering road of ethical permissions and restriction, continuity of support was problematic. Finding capable available supervision in my own faculty proved to be a huge obstacle, leaving me without any supervision for between March 2014 and October 2014. Undertaking transdisciplinary research is not for the faint of heart and it was only after I found my own place and capable supervisory support that I hit full stride.

However, I am heartened by the discoveries that have emerged, and excited about continuing to share the insights and shape both theory and practice going forward. While the precedents remain limited, the contribution of scholars such as Gail Whiteman[24] and Donde Plowman[25] has motivated this candidate to persevere, despite a series of constraints and obstacles, both in her overarching institutions and among the stakeholders who were involved in the wicked problem pursued in this thesis.

 I am especially proud to have tackled a wicked issue in the place where I lived, studied, and worked, and to contribute to multiple stakeholders who share this place with me. I can testify (retrospectively) of exceptionally rich learning journeys and, as in the case of this study, an appreciation of the shortcomings of fragmented knowledge to solve complex / wicked

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[24] See references
[25] I.e. Plowman, Baker, Beck, Kulkarni, Solansky, and Travis 2007

problems. My prior knowledge from experiences as a political analyst and business consultant provided an important basis for discovery in this study. A positive result of my preference for 'making things happen' as opposed to 'theorising' hinges on my experience, and is a strong demonstration of science in the service of society and the achievement of tangible impact even during the course of this study.

The joint undertaking that heightened my own sense of place and given me a deep appreciation for how place can keep or bring stakeholders apart. The 3-concept sequential framework that was induced from the data is comparable with prior dissertations on commons e.g. fisheries (MacDonald, 2011). Some of these gave rise to award-winning publications. In this vein, Zietsma's research (2003) resulted in a Best Paper in Administrative Science Quarterly by Zietsma and Lawrence (2010). As a first step of revision, a table has been added that refines and illustrates the three main constructs.

A common shortcoming of TD research is that ongoing momentum is at risk when "the project ends" and especially when the original champion, bridging agent or social entrepreneur moves on. I am committed to my agreement to stay on in my role beyond the timeframe of the official study. However, funding remains a huge challenge.

Looking forward, I plan to dedicate my academic and practitioner career to places that matter, and make the study of commons much more geographically specific and relevant to Stellenbosch.

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APPENDICES

APPENDIX 1 - TRANSDISCIPLINARITY: SITUATING THE RESEARCH PARADIGM

Traditional disciplinary methods are necessary but insufficient for studying wicked problems embedded in social-ecological eco-systems. "These problems are highly complex, as the causal processes run along different spatial, temporal and social scales, from local to global, from current events to long-term consequences, from action in everyday contexts to the policies of world-wide regimes and multinational organisations" (Jahn, 2008: 3).

While disciplinary knowledge generalises findings on the basis of standardised conditions, transdisciplinary research aims at validating abstract models in concrete life-world situations (Pohl & Hadorn, 2008). The transdisciplinary approach allows researchers to integrate and cross-fertilise different kinds of knowledge frameworks (Tengö, Brondizio, Elmqvist, Malmer & Spierenburg, 2014) through interactive and reflexive research processes that link socially generated practices and skills with contextual knowledge to produce "scientifically valid" and "socially useful" knowledge (Swilling, 2014: 2 of 7). Transdisciplinary research proposes alternative model of inquiry based on need to study real-world, complex problems collaboratively in society and co-create knowledge that is contextual, systemic and transformational.

To prepare myself for the study, I relied on Pohl and Hadorn's (2008) differentiation among three distinct types of knowledge and their articulation of the research questions and intended contributions associated with each type of knowledge (Table 7) and aimed for what they call "transformation knowledge". This assisted me to narrow down my research question to transitions and position my intended contribution to understand options for change.

Table 7 - Pohl and Hadorn's (2008) types of knowledge:

Types of Knowledge	Research Questions	Intended Contributions
Systems knowledge Context and social conditions of current situation: reflecting on and dealing with uncertainties through real-world experiments	Empirical questions: What is, or what actually constitutes the messiness or unsustainability of the real-world problem?	To which kind of need for change, desired goals and better practices does the research question refer? How to deal with uncertainties
Target knowledge Recognise the pluralism of norms and values inherent the perceptions of the represented interests: clarify and prioritise in relation to the common good as a regulatory principle.	Normative questions: What ought to be a more desirable and sustainable set of social conditions to resolve the problem situation at hand?	To which technical, social, cultural, legal and other possible means of acting does the research question refer – depending on views of the systems and options for change?
Transformation knowledge Deals with social change and transitioning: learning how to make existing technologies, regulations, practices and power relationships more flexible. The focus is on the possibilities of small-scale changes in the present for navigating our way towards a more desirable, just and sustainable situation – the target.	Transitioning questions: What can we already do in the present to move or steer ourselves from where we are in the direction of where we want to be?	To which technical, social, cultural, legal and other possible means of acting does the research question, which aims to transform existing practices and to introduce desired ones, refer?

As it became apparent that the river[26] played an inter-active role in the transition of corporate actors from transactional to transformative governance, I relied on Becker's (2012) recommendation to how one may deliberately cross the boundaries of different disciplines (Becker, 2012) to more fully characterize its properties and possibilities:

Boundary objects, Becker explains, consist of elements, the relationships between them, and

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[26] The discovery here revolves around how the river was construed as a boundary object in the first place – agreed that much is known about the use of boundary objects in general

the borders delimiting the system.

1] As social-ecological units, their elements (and their relationships) are classified as either 'social' or 'natural' or 'hybrid'.

2] Additionally, they get marked as complex systems: that is –

   a. they behave non-linearly;
   b. they have positive and negative feedback loops;
   c. they may form hierarchies, thus displaying emergence and self-organisation; and
   d. they depend strongly on their context and history.

Several others have noted that a transdisciplinary research approach is particularly well-suited for studying boundary objects (Audouin *et al*., 2013; Levin *et al*., 2013; Reyers, Nel, O'Farrell, Sitas & Nel, 2015).

Muhar, Visser and Breda (2013) further speak to broadening who participates in transdisciplinary research. To match the complexity of social-ecological eco-systems, mutual learning processes involving academics, scientists and society as end users are called for (Cronin, 2008). Simply put, societal actors who may be affected by a problem must be drawn into the research process; collaborative exchanges between concerned societal actors and scientific actors help turn a practical problem into a scientifically valid question, moving from lived experiences to orchestrated activities that expose, challenge and problematise the underlying assumptions. This dialectical back-and-forth process between theory and practice shapes the research process by employing a range of participatory research methods used in a pragmatic way "to prevent a project from being stuck by uncertainty or a "preliminary state of knowledge" (Pohl & Hadorn, 2008: 116).

Tengö *et al*. (2014: 580) argue that this integration of a diversity of knowledge systems can "contribute new evidence and also improve the capacity to interpret conditions, change, responses, and in some cases causal relationships in the dynamics of social-ecological systems". This process requires from the researcher the capacity to articulate knowledge in one's own discipline, to compare different approaches, and advance a more holistic understanding of the problem. The ability to communicate and work with multiple stakeholders to develop different pathways for action is key to transdisciplinary research (Van Breda, 2016), as is the integration of scientific inquiry with practical and tacit knowledge (Van Breda, 2016).

Jahn, Bergman, and Keil (2012: 4) explain that the "main cognitive challenge of the research process" is to systematically scrutinise the ways in which knowledge is produced and used by

different societal actors in support of their concerns, and recommends to "methodologically challenge how science itself deals with tension between its constitutive pursuit of truth and the ever-increasing societal demand for the usefulness of its results" (Jahn *et al.*, 2012: 09).

By drawing on some keystone thinkers in the field or TD research (Jahn *et al.*, 2012; Pohl & Hadorn, 2007; Van Breda, 2016), the fundamental principles that underlie transdisciplinary research approaches can be summarised as follows:

1] research methods that allow researchers to collaborate with multiple stakeholders through collective sense-making processes;

2] solution-oriented and transformative knowledge generation processes;

3] research processes that integrate theoretical and practical knowledge; and

4] developing theory heuristically from innovative ways of understanding the complex societal challenges that mark the real-world problems under study.

APPENDIX 2 - GLOSSARY

1] GOVERNANCE

Bottom up

Stakeholder-driven participatory approach to accommodate the complexities of scales, levels of stakeholder interests, perspectives, and approaches involved (Antadze *et al.,* 2014: 2).

Corporate governance

The well-known Cadbury Report (1992) set up a self-regulatory framework for corporations, defining corporate governance as the system by which companies are directed and controlled (Cadbury Report, 1992; Le Roux, 2010; Rossouw & Van Vuuren, 2004: 189).

Corporate Government vs Corporate Sustainability

Kolk (2008: 2) suggests that the distinction between corporate governance and corporate sustainability seems to be dealt with from an internal–external focus. Corporate governance frameworks define and frame corporate sustainability within codes of conduct and best practices to sustain business in society – the emphasis on the business.

Corporate Sustainability

Sustainability is an aspect of governance that focuses on the economic value of the company in balanced and integrated economic, social and environmental performance reporting (Ernst & Young; Deloitte & PricewaterhouseCoopers [PwC], 2009; Höver, 2004; Ulrich, 2008). Crowther (2002) defines corporate sustainability as broadly the concern with the effect of present action upon available options in the future referring to the carrying capacity of the ecosystem and the input–output models of resource consumption.

Commons

The commons is best described as a space (or public resource) that is freely accessible to anyone, but not owned by anyone. The internet, public streets, a parking lot, a catchment, or a river are all commons, you do not need permission to use it (Lessig 1999).

Collaborative governance

Collaborative governance brings multiple public and private stakeholders together in collective forums with public agencies to engage in consensus-oriented decision-making (Ansell and Gash 2007: 543). In this study, it emerges from a process of facilitation and mediation.

Environmental governance

A set of institutional arrangements (such as rules, policies, and governance activities) that are used by one or more actor groups to interact with and govern an environmental

commons. Examples include the Montreal Protocol regime, the Great Barrier Reef Marine Park Act, and the International Convention for the Conservation of Atlantic Tuna (Cox 2014: 271).

Firm-centric

Corporate sustainability responses are increasingly instrumentalised for processes of governing risk mitigation and value creation for the firm (Korhonen & Seager, 2008; Seager, 2008; Welford, 1995).

Governance

The notion of 'governance' needs be understood in its broadest sense and describes the multitude of actors and processes that lead to collectively binding decisions (Van Asselt & Van Bree, 2011).

Governance systems

Governance systems should be interpreted to include all the mechanisms and frameworks or processes of interaction and decision-making in any form of organisation, whether it is a corporate, geopolitical (nation state), socio-political or an informal entity (Biggs, Westley & Carpenter, 2010).

Polycentric governance

A formalised process of engagement, bringing together of many centres of decision-making (multiple governing authorities at differing scales) (Anderies & Janssen, 2012; Ostrom *et al.*, 1999; Ostrom 2009; 2010), that are formally independent of each other, but involved in competitive relationships or connected to each other in cooperative undertakings, or which have recourse to central mechanisms to resolve conflicts, functioning as a system (Ostrom *et al.*, 1999; Ostrom 2009; 2010; Ostrom & Cox, 2010).

Top down

Hierarchical, regulatory, and prescriptive approach to mandate governance approaches directed by rules and codes (Kreitner & Kinicki 1992: 535, 637).

Traditional governance

Hierarchical coordination through central authority, central planning, or central rules - the source of the power is at the centre (Scharmer 2009: 240).

Transactional interaction

Transactional approaches, governed by contractual agreements that focus on containing risks and controlling outcomes trough a system of rewards and sanctions to motivate certain outcomes, using corrective action to address failure (Kreitner & Kinicki 1992: 535, 637). .

2] OTHER CONCEPTS

Adaptive capacity

"[T]he capacity to self-organise and adapt to learn in response to internal and external disturbances and changing conditions, and are characterised by non-linear dynamics" (Biggs, Schluter and Schoon 2016: 16). The mechanism for institutions is learning through trial and error, to respond through experience gained in feedback loops (Gunderson & Holling, 2012:142-146)

Reductionist

Swilling and Annecke (2012: 5) explain reductionism as an "analysis that to explain a complex reality which depends on the reducibility of the multiplicity of components of this reality to a few basic elements which are deemed *a priori* to hold a greater explanatory weight than any others in the system".

Resilience

Biggs, Schluter and Schoon (2016: 15) explain that the notion of human society's embeddedness in and as part of Earth's biosphere is fundamental to the resilience approach. "[T]he resilience perspective fundamentally assumes that SES behave as a complex adaptive system (CAS), meaning SES have the capacity to self-organise and adapt to learn in response to internal and external disturbances and changing conditions, and are characterised by non-linear dynamics" (16).

Social innovation

Social innovation refers to new concepts, strategies, initiatives, products, processes, or organisations that meet pressing social needs and profoundly change the basic routines, resources and authority flows, or beliefs of the social system in which they arise (Biggs, Westley and Carpenter 2010)

Transformative Collaborative Governance

TCG is defined as a comprehensive set of relational agreements and commitments that voluntarily formed among stakeholders from different sectors that co-inhabit and co-depend on the same socio-ecological ecosystem.

Transformation

A function of shifts in individual perceptions, perspectives and intentions, combined with shifts in collective perceptions and intentions. When individuals and groups take action based on changed perspectives and intentions, transformative structural and systemic change can occur.

Wicked problems

Dentoni, Hospes and Ross (2012) explain wicked problems as issues that are highly complex, they have innumerable and undefined causes, and are difficult to understand and frame. "The result in outcomes that are either uncertain or unknowable, and often

affect multiple stakeholders…" (2). Rittel and Webber (1973) who coined the term explain that wicked problems include nearly all public policy (social) issues – "whether the question concerns the location of a freeway, the adjustment of a tax rate, the modification of school curricula, or the confrontation of crime" (160). Rittel and Webber (1973: 161) state that the formulation of the problem is the problem, the information needed to understand the problem depends upon one's idea for solving it. "Problem understanding and problem resolution are concomitant to each other" (161)

APPENDIX 3 - CHARACTERISTICS OF COMPLEX SYSTEMS

In the following section, I present an overview of the characteristics of complex systems. This is done to provide a summary of the properties and dynamics of such systems to expose the scientific and methodological limitations of traditional scientific models, and how they are inadequate in addressing the current challenges faced by society in defining and developing governing strategies for sustainability. Chu, Strand and Fjelland (2003), state that complex systems can be characterised in terms of six generic generators of complexity, as summarised below:

1] Internal homogeneity

Complex systems are constituted by large numbers of interacting elements. The more homogenous the elements are, the more connections that can possibly be made, and the greater the possibility for novel behaviour becomes. Difference is seen as a resource in a complex system (Cilliers, 1998).

2] Adaptivity

Complex systems have the ability to adapt when the context changes or when perturbed into new trajectories. Through the process of self-organisation, phenomena are capable of producing qualities of the living, seen in self-reproduction, self-reparation and self-organisation. The self-organising capacity of a system is dependent on, and responds to changes in its environment, from which it draws energy. Information works to maintain itself through re-enforcing or constraining feedback loops.

3] Non-linear interactions

Complex systems are marked by non-linear interactions that bring about change that is not based on a simple proportional relationship between cause and effect. Small causes may give rise to large effects. A relationship or process in which a small change in the value of a driver (i.e. an independent variable) produces a disproportionate change in the outcome (i.e. the dependent variable) is called non-linear. Non-linear interactions cause changes that are often abrupt, unexpected and difficult to predict. A minor cause can produce disproportionately major consequences and vice versa. This means that no proportional relationship is possible between input and output. It is therefore difficult to predict or measure the behaviour or outcomes of complex phenomena (Cilliers, 1998; Preiser, 2012).

4] Net-like structures – high connectivity

Complexity emerges in the rich patterns of interaction between phenomena, and is not confined by the functions of components in isolation. Through the net-like structures that emerge via these connections, some phenomena can only be understood in terms of their relational properties as being part of larger systems. As a result, a system comprises of relationships between parts that can differ from one another, and new qualities or properties appear due to the interaction of these parts as a whole. Because phenomena are organising as a whole, they are emergent. The properties of the whole are different to the properties of the constituent parts. Subsequently, to study complexity, we are challenged to comprehend the relationships between the whole and the parts. Capra and Luisi (2014) explain that the new emphasis that has been given to complexity, networks and patterns of organisation has led to a novel kind of 'systemic' thinking.

5] Radical openness

Systems do not have clear boundaries between the interactions of elements that form a system, and the environment within which systems thrive (Cilliers, 1998). It is more appropriate to think of systems as being embedded within other systems, and that these all form part of other larger or overlapping systems. As such, radical openness is a direct consequence of the richness in the connections between systems and the environments within which the systems are embedded. However, to study the system interactions, the observer needs to frame the system in terms of certain parameters and constraints, and in doing so, some elements that might have an important influence in the system, are left out of the calculations or narrative. As a result, having an adequate description of the entire system is observer-dependent, and there is no objective framing that marks the most objective position from where to frame or model the system (Chu *et al.*, 2003; Cilliers, 1998).

6] Contextuality

The emergent systemic nature of complexity means that complexity cannot be reduced into its isolated components or its basic constituents. This is not because the system is not constituted by them, but because components in systems have multiple and emergent functions, and these functions change when their context changes. The system has a life cycle, the past is integrated with the present and the elements evolve with one another and with the environment. Evolution is therefore irreversible. Complex systems have to deal with a changing environment, and great demands are made on the resources of the system, depending on the severity of these changes. To cope with these demands, the

system must be able to store information concerning the environment to respond appropriately to the environment (the process of representation and meaning), and it must be able to adapt its structure when necessary, to cope with its environment (the process of self-organisation, or resilience) (Cilliers, 1998; Preiser, 2012).

The above-mentioned characteristics and acknowledgement of the nature of complex phenomena, expose the limits of Newtonian models. Complexity Theory, an approach marked by acknowledging the complex nature of reality (Cilliers, 1998; Wells, 2012) departs from the assumption that our world resembles a machine that changes deterministically, in an event-free manner. This approach rather contends that reality resembles a complex adaptive system containing a large number of independent, interacting and interconnected parts (Juarrero, 2000; Snowden & Boone, 2007).

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APPENDIX 4 - STUDIES AND PUBLICATIONS ON ERC WATER QUALITY

1] Barnes, J.M. & Taylor, M.B. 2004. *Health Risk Assessment In Connection With The Use Of Microbiologically Contaminated Source Waters For Irrigation.* Report Water Research Commission Project K5/226/1/03. pp.127

2] Barnes, J.M. 2010. *Heading for disaster: sanitation failures and water pollution.* Invited paper presented at Public Health Association of South Africa conference. East London. 1 December.

3] Sigge, G.O. & Britz, T.J. 2012 *A quantitative investigation into the link between irrigation water quality and food safety.* Water Research Commission Project K5/1773. vols I-IV

4] Oberholster, P.J. & Botha, A-M. 2014. Importance of water quality to the food industry in South Africa. *Understanding the Food Energy Water Nexus.* WWF-SA, South Africa. WWF Report.

5] Barnes, J.M. 2003. *The impact of water pollution from formal and informal urban developments along the Plankenbrug River on water quality and health risk.* Doctoral dissertation, Stellenbosch: University of Stellenbosch**.**

APPENDIX 5 – CORRESPONDENCE AND CONSENT

1] Distell

8 April 2013

Group Manager: Talent and Organisation Development: Mr Shayne Roux
Director: Corporate Affairs: Mr Vernon De Vries
Director: Quality Management & Research: Marius Lambrechts
Environmental Manager: Mr Jacques Rossouw

Doctoral study: Proposal Addendum:- Succinct update of current research trajectory and application for ethical clearance

As agreed, an update of the shift and changes in my case study focus follows. Some time has lapsed since the agreement, as the dynamics of the case study was subject to gain a better insight and understanding of the context and how to position the case study. This required a few interviews, attendance of specific meetings (i.e adopt-a-river, etc) and identifying the other key stakeholders in this case study.

The shift came at the end of 2012, at the international Responsible Leadership conference and PhD colloquium in November at Spier, and some insightful discussions with key international academics such as Steve Wadell working on large systems governance, and proff McLachlan and Hamman from the Foodlab. My title now read as follows: *Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.*

Unfortunately, the holiday season over the months of December and January, together with a very busy February for most of the key stakeholders as they commenced with a busy 2013 diary, slowed down the process of connecting and interviewing the different key stakeholders for the case study. I also attended two conferences and assisted prof Ralph Hamman in the corporate citizenship M-module at the Sustainability Institute in the months of February and March.

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I am confident that I have managed to define the case study context much better now, especially as far as Distell's and the other identified key stakeholders' participation and interests are concerned.

As a consequence it also held up my application for ethical clearance. My application for ethical clearance is submitted to my supervisor to be processed at the University of Stellenbosch Business School (USB), as partial fulfillment of compliance to the PhD ethical guidelines and requirements of the Stellenbosch University. This application includes an agreement of informed consent, which will be submitted to each participant as soon as I obtained the necessary approval.

The USB places the responsibility of determining if a research has ethical implications mostly on the researcher and the supervisor. I covered all my bases and completed all the necessary forms as well as the pro-forma letter of consent to be reviewed by my supervisor, prof Smit, who has been tied up and not available for administrative matters in the last month.

In the mean time, to speed up the process, I am taking the liberty to provide the draft of the pro-forma letter of consent to my case study participants for their perusal and information. Distell requested anonymity under the previous conditions of being the focus of my case study. The shift in my approach might not influence this original requirement, and for that reason I completed all the detailed forms should it be necessary.

Mr Roux also indicated that Distell wants to draw up its own letter of consent, and it would be good if, after you had a look at the attached draft, introduce your letter of consent if you require it, or perhaps make some changes to the draft attached, that will cover your requirements.

A significant shift
My research focus had a shift from a strong focus on corporate governance perspectives of sustainability in Stellenbosch (Distell), to multi-stakeholder collaboration towards an effective governance system for sustainability around a

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shared resource in the Eerste River catchment (Distell and other key stakeholders), towards the end of 2012. This shift was introduced by better insight and understanding of the Sustainable Stellenbosch initiative realities with specific reference to the disruptions and discontinuities in the mandate sphere of the municipality, and its relationships with the community in Stellenbosch.

Attention was drawn to the river and water quality issues and the municipality's attempts to address them satisfactorily within the scope of their mandate marked by their limited capacities. Pollution and poor management of the river and water quality is evident in the entire catchment with different causes at different points, and it depends on where the attention is drawn when problems surface. The river and water quality is critical in the business operations affected by ineffective governance of the river, pollution and maintenance. It is a well-established reality that the Stellenbosch Municipality does not have a strong relationship and partnership with most big stakeholders in the Eerste River catchment, and faces low trust and lawsuits.

The gravity of this situation was brought to the attention of the broader public with the media coverage of the heavily polluted water of the Eerste River, jeopardising the region's fruit exports, and wine industry among other consequences, such as tourism, health and safety and the success of the Stellenbosch Urban River Basin (SURB) Management Project proposal for funding from the Netherlands. If the project proposal is not successfully accepted, the Stellenbosch Municipality will have to find funding (R32 mil) from different sources, as the infrastructure budget has a backlog of R1,5 billion. The Netherlands funding agency and project management company expressed concern over the continuity and sustainability of the project objectives, once the project is completed.

The Winelands Water Users Association, representing farmers, individual users, conservation authorities, and the municipality itself, has called on Agriculture MEC Gerrit van Rensburg to intervene in the Eerste River's worsening condition, and a five-step action (emergency) plan to introduce some improvements was submitted.

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The challenge
The central focus of this research is to understand how stakeholders in the Eerste River catchment respond to this reality, as they position themselves from a perspective of sustainability in their natural and social ecosystem contexts, in relation to its environment and community on which it depends for a sustainable existence.

From this positioning follows a case study to explore how key stakeholders can collaborate to develop a sustainable and collective response to a shared problem with regard to the sustainability issues around the ecosystem and water quality in the Eerste River catchment of the greater Stellenbosch area. The Eerste River catchment includes all the different rivers and streams that joins the Eerste River in the Greater Stellenbosch Area.

The sustainable development challenge in Stellenbosch is a governance challenge. The use of the concept of governance as a technical power arrangement and decision making structure only, is not effective. The goal is to create a self-sustaining system where stakeholders interact and collaborate to manage their different interests in a self-sustaining sense.

In this context, Distell is one of the critical stakeholder participants in the sustainability dialogue for Stellenbosch against the setting as unpacked in the research and case study motivation submitted to Distell on 3 October 2012, for consideration to participate. With the shift, attention now turns to Distell and other key stakeholders in the water quality issue of the Eerste River catchment, in relationship with the environmental and social ecosystems of the greater Stellenbosch area.

The stakeholders who agreed to participate are the Wineland Water User Association, Stellenbosch Municipality (engineering and infrastructure, and the adopt-a-river initiative), Dr Jo Barnes from Stellenbosch University Health Science whi is involved in the river water quality dialogue, Spier, Villiera Wines, and Berg Kelder. The Departments of Water Affairs, Agriculture and Environmental Affairs,

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together with the WWF will be approached to participate. It makes sense to include all the Distell subsidiaries in the catchment, and I will approach the operations manager of Adam Tas again, as she was not available in March, and did not respond to my request per mail. A few other stakeholders such as Vredenheim is under consideration. The Kayamanndi/Enkanini informal setlement will also be represented as a significant stakeholder. The opportunity exists to learn from the Berg River water management project as I was invited to this project as an observer.

Purpose of the study

The overarching purpose of this study is to understand how corporate governance perspectives influences approaches to sustainability in the greater Stellenbosch area, with emphasis on corporate strategy, governance practices and institutional arrangements and collaboration as a response to the water quality issues and relationship system.

The key purpose is to realise a collaborative governance process that can effectively manage the relationship system to support sustainable development in shared use of a common resource.

Methodology

This shift pushes my research into the participatory inquiry approach to the context in which business operates, and the context of the community in which the business operates, with multi-stakeholder collaboration.

This study is an explorative inquiry of corporate perspectives on sustainability and response to the social-ecological systemic context of Stellenbosch, and stakeholder interaction and interdependence.

Action research is chosen as the best strategy to engage with the participants in a process to collectively understand the current situation with the water quality issue that is stuck in its complexities.

The process will use multiple methods to create and hold a space to open up dialogue and co-produce understanding of the issues amidst the different interests,

* *Dialogue interviews and dialogue groups*

Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from late April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

* *Learning journeys and presentation of the river issues*

It is necessary to visit the sites (the river and different impact points) in groups with the focus on experiencing the situation, and engage with each other around this. These visits will aim to inform and learn.

The visits focus on some burning issues such as the Planckenburg river and Kayamanndi/Enkanini infrastructure on the river, as well as the industrial activities, the town with its students, residents, businesses, tourists, the different confluences of the different subsidiary streams, the general health of the catchment, the landfill and water treatment plant on the Veldwachters river, the different participant and stakeholder sites, and general agricultural activities.

As time is a restricting variable, the learning journey will be planned with the stakeholders at the first dialogue session to determine how many visits to how many impact points will make sense.

* *Presentations and feedback sessions*

The participant stakeholders will get feedback in one hour sessions end of June, end of September and early December. March 2014 will be the last session, alternatively on arrangement with the participants

* *Workshops*

The aim with is to create a public space in the form of world café, where the stakeholders can engage with the different views and interests around a common

views, and perspectives of power structures and ethics, reflect on the possibilities, and to develop the vehicle for an appropriate response, to influence policies toward a sustainable governance system of the river catchment.

Distell will not be subjected to a scrutinizing, in-depth research into the company any more. The focus falls on multi-stakeholder collaboration around a shared problem for sustainability.

The most effective strategies of inquiry and methods to collect empirical material will be document analysis, explorative interviews, workshops (i.e world café), and dialogues interviews in a period of eight to nine months.

A heuristic framework will guide a process of observation, reflection and action to realize and optimize a collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

* *Records*

Access will be needed to all relevant documents concerning sustainability and corporate responsibility. This can be discussed and agreed upon with the relevant role players at the stakeholders (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, stakeholder relations, social responsibility initiatives and policy, primary production, and finances. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

* *Explorative interviews*

The explorative interviews commenced in November 2011, and a few were done. The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space that where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. The interviews are with key role players (i.e operations management), and will be made on demand as the case study progresses and is typically 1-2 hours.

problem, to create the opportunity to gain valuable insight from the broader public interests and perspectives, as well as knowledge. Not more than four (4) is anticipated. The first one will be in June 2013, the second in September 2013, and a third late November 2013.

* *Attendance of relevant meetings*

For the purposes of the study it is important to have observer status at relevant meetings of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability and collaboration.

Potential discomfort and risks

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the world café sessions, which will be publicly announced in the media and per e-mail invitations to the different stakeholder communities and role players.

Potential benefits

This study aims to develop a sustainable and inclusive approach in a community with different stakeholders, interests and institutional approaches, to effectively collaborate around a shared problem around the ecosystem and water (of the Eerste River catchment).

My research is part of a transdisciplinary research programme at the Sustainability Institute, and there are collaboration with other graduate students and academics from other academic departments, for example Political Science, Health Sciences (Food Lab and food security, Stellenbosch University Water Institute), Agriculture, Engineering, Theology, Centre for Studies in Complexity and different Business Schools from South Africa and Australie (USB, USB-Ed, UCT, Griffiths).

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study also aims to

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bridge the gap between the many different attempts and projects on the river issue, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Yours sincerely

Charon Marais
PhD Student
Sustainability: Transformational corporate governance
0823970769

DISTELL

HEAD OFFICE/HOOFKANTOOR: AAN-DE-WAGENWEG, PO BOX / POSBUS 184, STELLENBOSCH 7599, REPUBLIC OF SOUTH AFRICA
TEL: +27 (0)21 809 7000 · FAX / FAKS +27 (0) 21 886 4611 · www.distell.co.za

Enquiries/Navrae: J. Rossouw	Tel:	021 809 7570	Fax 086 765 9584
Reference/Verwysing: Charon Marais	Date/Datum:		18 April 2013

Mrs Charon Marais – (27728443200@vodamail.co.za)
PhD Student
University of Stellenbosch

Dear Charon

DOCTORAL STUDY PROPOSAL

I refer to your meeting with our Mr Shayne Roux on 12 April 2013 as well as our meeting earlier today regarding your attached doctoral study proposal entitled "*Towards a sustainable governance system of the Eerste River Catchment in the greater Stellenbosch area*".

The current condition of the Eerste River and especially the Plankenbrug River is of great concern to Distell, due to both the direct impact on Distell personnel as well as downstream water users.

The deteriorating water quality of the Plankenbrug River has been the subject of numerous studies, newspaper articles and research papers. While most of these focussed on quantifying the problem and trying to identify the source of the pollution contributing to the situation, not many has focussed on trying to resolve the problem. It is therefore also refreshing to read your proposal focussing on this aspect.

Distell supports your proposal and is committed to trying to find a possible solution to the problem. Distell will also like to actively participate in your research project. For logistical purposes your contact with Distell will be our Environmental Manager - Mr Jacques Rossouw (jrossouw@distell.co.za and 021 809 7570).

As discussed, please provide Distell with a copy of your "Ethical Clearance documentation" from the University, once available.

Good luck with your studies.

Kind regards

Jacques Rossouw
ENVIRONMENTAL MANAGER
HOLDING COMPANY / BEHERENDE MAATSKAPPY
HOLDING COMPANY / BEHERENDE MAATSKAPPY
DISTELL GROUP LTD./DISTELL GROEP BPK.

Directors/Direkteure: DM Nurek (Chairman/Voorsitter), RM Rushton (Managing Director/Besturende Direkteur) PE Beyers, MJ Botha, JG Carinus, GP Dingaan, JJ Durand, E de la H Hertzog, MJ Madungandaba, LM Mojela, CA Otto, AC Parker, JJ Scannell , CE Sevillano-Barredo, BJ Van der Ross, LC Verwey. Company Secretary/Maatskappysekretaris: CJ Cronjé.

Company Registration No. / Maatskappy Registrasie Nr. 1988/005808/06
OPERATING COMPANY/BEDRYFSMAATSKAPPY
DISTELL LIMITED / DISTELL BEPERK

Directors/Direkteure: RM Rushton (Managing Director/Besturende Direkteur), MJ Botha, W Bührmann, PF Carolin, VC de Vries, DJ Gallow, C Gous, DM Hegland, SW Klopper, MG Lambrechts, NT Moodley, K Pillay, JJ Scannell, CLC Snyman, JJ Venter.

Company Secretary/Maatskappysekretaris: CJ Cronjé.
Company Registration No. / Maatskappy Registrasie Nr. 1962/001333/06

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

The transdisciplinary methodological approach will use action research as a framework to engage with the decision makers and high-level stakeholders closest to the issues, to develop a multi-stakeholder collaborative governance process to deal with the problems around shared use of water in the Eerste River catchment.

If you agree to participate in this study, we would ask you the following things:

The most effective strategies of inquiry and methods to collect empirical material will be analysis of relevant media and in-house documents, explorative interviews, workshops, and dialogues in a period of eight to nine months. A heuristic (exploratory problem-solving and learning techniques) framework will guide a process of observation, reflection and action to realize and optimize a

collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

Records: Media, open source, reports and official documents
Access to official documents will be on a need to know basis and can be discussed and agreed upon with the relevant role players (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, strategic objectives, behaviour, stakeholder and other relations, social responsibility initiatives and compliance philosophy and governance policy. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

Explorative interviews
The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

Learning journeys and presentation of the river issues
It is necessary to visit the sites (the river and different impact points) in groups with the focus on experiencing the situation, and engage with each other around this. These visits will aim to inform and learn. The visits focus on some burning issues such as the Plankenbrug river and Kayamanndi/Enkanini infrastructure on the river, as well as the industrial activities, the town with its students, residents, businesses, tourists, the different confluences of the different subsidiary streams, the general health of the catchment, the landfill and water treatment plant on the Veldwachterspos river, the different participant and stakeholder sites, and general agricultural and industry activities. As time is a restricting variable, the learning journey will be planned with the stakeholders at the first dialogue session to determine how many visits to how many impact points will make sense.

Presentations and feedback sessions
The participant stakeholders will get feedback in one hour sessions end of June, end of September and early December. The last session can be early 2014, or on arrangement with the participants.

Workshops
The aim is to create a public space in the form of deep dialogue sessions, where the stakeholders can engage with the different views and interests around a common problem, and create the opportunity to gain valuable insight and co-produce knowledge and understanding from the broader interests and perspectives.

Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamanndi Tourist Centre, and Spier for a venue.

3. POTENTIAL RISKS AND DISCOMFORTS

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the dialogue sessions, which will be scheduled via e-mail invitations with the different stakeholder communities and role players.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

The process involve multiple stakeholders developing a collaborative governance approach to deal with a shared problem around ecosystems, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

Any conversation (interviews, dialogue groups, meetings, the learning journey, presentation and feedback sessions) will be audio taped, and possibly photographed and video taped. The video recordings and photos will be included in my journaling, the audio recordings will be transcribed in my reporting and writing of my paper. The audio files will eventually be destroyed after successful completion of my research.

In the event of necessary sharing or releasing any information that might compromise a participant's (who requires anonymity and confidentiality) identity, in line with my research activities, and it is foreseeable but necessary, I will consult with you to discuss a way or strategy to uphold my commitment to you. I will share information with my primary supervisor, dr Arnold Smit of the University of Stellenbosch Business School in his capacity as my supervisor.

Additionally, I might have to discuss information with the following individuals:
- Prof Oliver Williams, my secondary supervisor
- Prof Nico Koopman, dean of the Faculty of Theology, in his capacity as the consultative specialist in the Public Theology and ethics realm
- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
- I will engage the assistance of a co-facilitator for my focus groups, Dieter van deb Broeck from Living Lands.
- assistants with the open space dialogues and dialogue sessions.
- Dialogue groups consisting of the participants in this study
- Open space dialogues and 'focus group' sessions will focus on a broader audience that will not necessarily be restricted to the participant subjects, but will aim to open up dialogue and reflection on the issue of sustainability, and multi-stakeholder collaboration towards a desired governance system for the Eerste River catchment.
- I will also solicit with an objective academic as a confidant and mentor to debrief with me after such sessions in their capacities as academics involved in sustainability and health in communities locally, nationally and globally.
- Academics and specialists closely involved with the water quality dialogue of the two major river basin management projects in Stellenbosch and on the Berg River.

Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

In case of anonymity and confidentiality, specific details that could make a participant identifiable in audio- and visual material and transcribed interviews, will be altered in consultation with the input and consent of the specific participant/s. The participant subject will have the right to review and edit and/or alter any such material, before it is submitted as part of my thesis or used in any publication, presentation, or written or video-/audio report or feedback.

Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

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commitment to uphold anonymity or requests to not be quoted will apply. They might also be used as support for educational and presentation purposes in similar cases, feedback to stakeholder groups, and stakeholder participants, as well as in colloquia to academic audiences or interested parties in the water and sustainability discourse.

Records that contain sensitive information that may have the potential to compromise the participant's anonymity and confidentiality of information, will be destroyed or erased personally and properly after successful submission and completion of the research.

I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [*If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.*]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

_____Jacques Rossouw_____
Name of Subject/Participant

_____
Name of Legal Representative (if applicable)

_____Rossouw_____   22/5/2013
Signature of Subject/Participant or Legal Representative   Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to Dr Clell [*name of the subject/participant*] and/or [his/her] representative Jacques Rossouw [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/English/Xhosa/Other*] and [*no translator was used/this conversation was translated into _____ by _____*].

_____   22/5/2013
Signature of Investigator   Date

2]   Stellenbosch Municipality

STELLENBOSCH MUNICIPALITY
STELLENBOSCH·PNIEL·FRANSCHHOEK

MUNISIPALITEIT ·UMASIPALA ·MUNICIPALITY

☎ 021-808 8213	Directorate: Engineering Services	epos/email:
🖨 021-883 9912	Direktoraat: Ingenieursdienste	andre.vanniekerk@stellenbosch.gov.za

13 December 2012

Dear Ms Marais

REQUEST FOR PERMISSION TO INCLUDE INPUT BY EMPLOYEES OF STELLENBOSCH MUNICIPALITY IN RESEARCH

We hereby accept your request received for input / participation by the following employees employed by Stellenbosch Municipality to be included in your research:

André van Niekerk	(Director: Engineering Services)
EJ Wentzel	(Manager: Transport, Roads and Stormwater)
Schalk van der Merwe	(Environmental Planner: Spatial Planning, Heritage and Environment)

Yours faithfully

A VAN NIEKERK (Pr.Eng.)
DIRECTOR: ENGINEERING SERVICES

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

The transdisciplinary methodological approach will use action research as a framework to engage with the decision makers and high-level stakeholders closest to the issues, to develop a multi-stakeholder collaborative governance process to deal with the problems around shared use of water in the Eerste River catchment.

If you agree to participate in this study, we would ask you the following things:

The most effective strategies of inquiry and methods to collect empirical material will be analysis of relevant media and in-house documents, explorative interviews, workshops, and dialogues in a period of eight to nine months. A heuristic (exploratory problem-solving and learning techniques) framework will guide a process of observation, reflection and action to realize and optimize a

collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

Records: Media, open source, reports and official documents
Access to official documents will be on a need to know basis and can be discussed and agreed upon with the relevant role players (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, strategic objectives, behaviour, stakeholder and other relations, social responsibility initiatives and compliance philosophy and governance policy. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

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The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

Learning journeys and presentation of the river issues
It is necessary to visit the sites (the river and different impact points) in groups with the focus on experiencing the situation, and engage with each other around this. These visits will aim to inform and learn. The visits focus on some burning issues such as the Plankenbrug river and Kayamanndi/Enkanini infrastructure on the river, as well as the industrial activities, the town with its students, residents, businesses, tourists, the different confluences of the different subsidiary streams, the general health of the catchment, the landfill and water treatment plant on the Veldwachterspos river, the different participant and stakeholder sites, and general agricultural and industry activities. As time is a restricting variable, the learning journey will be planned with the stakeholders at the first dialogue session to determine how many visits to how many impact points will make sense.

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The aim is to create a public space in the form of deep dialogue sessions, where the stakeholders can engage with the different views and interests around a common problem, and create the opportunity to gain valuable insight and co-produce knowledge and understanding from the broader interests and perspectives.

Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamanndi Tourist Centre, and Spier for a venue.

3. POTENTIAL RISKS AND DISCOMFORTS

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the dialogue sessions, which will be scheduled via e-mail invitations with the different stakeholder communities and role players.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

The process involve multiple stakeholders developing a collaborative governance approach to deal with a shared problem around ecosystems, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

Any conversation (interviews, dialogue groups, meetings, the learning journey, presentation and feedback sessions) will be audio taped, and possibly photographed and video taped. The video recordings and photos will be included in my journaling, the audio recordings will be transcribed in my reporting and writing of my paper. The audio files will eventually be destroyed after successful completion of my research.

In the event of necessary sharing or releasing any information that might compromise a participant's (who requires anonymity and confidentiality) identity, in line with my research activities, and it is foreseeable but necessary, I will consult with you to discuss a way or strategy to uphold my commitment to you. I will share information with my primary supervisor, dr Arnold Smit of the University of Stellenbosch Business School in his capacity as my supervisor.

Additionally, I might have to discuss information with the following individuals:
- Prof Oliver Williams, my secondary supervisor
- Prof Nico Koopman, dean of the Faculty of Theology, in his capacity as the consultative specialist in the Public Theology and ethics realm
- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
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- Open space dialogues and 'focus group' sessions will focus on a broader audience that will not necessarily be restricted to the participant subjects, but will aim to open up dialogue and reflection on the issue of sustainability, and multi-stakeholder collaboration towards a desired governance system for the Eerste River catchment.
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Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

In case of anonymity and confidentiality, specific details that could make a participant identifiable in audio- and visual material and transcribed interviews, will be altered in consultation with the input and consent of the specific participant/s. The participant subject will have the right to review and edit and/or alter any such material, before it is submitted as part of my thesis or used in any publication, presentation, or written or video-/audio report or feedback.

Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

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commitment to uphold anonymity or requests to not be quoted will apply. They might also be used as support for educational and presentation purposes in similar cases, feedback to stakeholder groups, and stakeholder participants, as well as in colloquia to academic audiences or interested parties in the water and sustainability discourse.

Records that contain sensitive information that may have the potential to compromise the participant's anonymity and confidentiality of information, will be destroyed or erased personally and properly after successful submission and completion of the research.

I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [*If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.*]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

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You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

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The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.
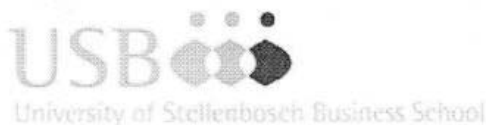
André van Niekerk
Name of Subject/Participant

Name of Legal Representative (if applicable)

13/12/2012

Signature of Subject/Participant or Legal Representative   Date

---

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to André van Niekerk [*name of the subject/participant*] and/or [*his/her*] representative colleagues & EJ Keubel, Schalk rid Ancour, Gerald Ecau + Brett Keuper [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into NA by _____*].

13/12/2012

Signature of Investigator   Date

USB
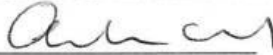University of Stellenbosch Business School

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This agreement serves to confirm that the research subject (participant) mentioned below gave her/his consent to participate in a qualitative process study titled, **Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.** The research participant agrees to provide the researcher with his/her experiences and views of the area of research to the best of his/her ability.

The undersigned participant understands the purpose and nature of this study and understands that her/his participation is voluntary and that s/he may stop the interview/compiling solicited essays/memoranda at any time. The participant further grants permission for the data collected to be used in fulfilment of the requirements for the degree **PhD** including a report, and an article to be submitted to University of Stellenbosch, and any future publication(s).

The data collected will be used for research purposes only; the researcher undertakes neither to disclose the identity of any of the participants should they require anonymity, nor the origin of the statements made by any of them. However, the undersigned participant understands that in terms of the ideals of the study's methodology that the researcher is obliged to make use of verbatim statements from the transcribe taped interviews and/or excerpts from solicited essays and/or any other written (e.g reports) or visual (e.g. photographs) in order to illustrate the world of the research participants and their perspectives in the research report.

The participant grants permission for the audio recording and taking photos and that the researcher may also make notes of her/his views and experiences. The participant undertakes to give a true representation of her/his perspective and/or her/his experiences.

I, André van Niekerk   the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _____

Title, initials & surname: Mr A. van Niekerk   Researcher: Charon Marais
                                                          Tel: 0823970769
Date: 13/12/2012   E-mail: navigator@vodamail.co.za

Place: Stellenbosch

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

3] Wynland Water User Association

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

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The transdisciplinary methodological approach will use action research as a framework to engage with the decision makers and high-level stakeholders closest to the issues, to develop a multi-stakeholder collaborative governance process to deal with the problems around shared use of water in the Eerste River catchment.

If you agree to participate in this study, we would ask you the following things:

The most effective strategies of inquiry and methods to collect empirical material will be analysis of relevant media and in-house documents, explorative interviews, workshops, and dialogues in a period of eight to nine months. A heuristic (exploratory problem-solving and learning techniques) framework will guide a process of observation, reflection and action to realize and optimize a

collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

Records: Media, open source, reports and official documents
Access to official documents will be on a need to know basis and can be discussed and agreed upon with the relevant role players (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, strategic objectives, behaviour, stakeholder and other relations, social responsibility initiatives and compliance philosophy and governance policy. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

Explorative interviews
The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

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Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamanndi Tourist Centre, and Spier for a venue.

3. POTENTIAL RISKS AND DISCOMFORTS

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the dialogue sessions, which will be scheduled via e-mail invitations with the different stakeholder communities and role players.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

The process involve multiple stakeholders developing a collaborative governance approach to deal with a shared problem around ecosystems, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

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8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
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SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

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[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

Quinton Brynard
_____
Name of Subject/Participant

_____
Name of Legal Representative (if applicable)

_____   1 Feb 2013
Signature of Subject/Participant or Legal Representative   Date

---

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to NWUA CEO [*name of the subject/participant*] and/or [his/her] representative Quinton Brynard [*name of the representative*]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/English/Xhosa/Other*] and [*no translator was used/this conversation was translated into ___ by ___*].

_____   1/2/2013
Signature of Investigator   Date

USB

University of Stellenbosch Business School

INFORMED CONSENT AGREEMENT

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I, *Quinton Brynard* the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _____

Title, initials & surname: _Mr Q Brynard_____   Researcher: Charon Marais
                                                  Tel: 0823970769
Date: __01/02/2013_____   E-mail: navigator@vodamail.co.za

Place: __Stellenbosch_____

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

4]   Spier Wine Estate

Spier

15 May 2013

Mrs Charon Marais
PhD Student
University of Stellenbosch

Dear Charon

DOCTORAL STUDY PROPOSAL

Thank you for the meeting on 28 January 2013 as well as our meeting earlier today regarding study proposal entitled "Towards a sustainable governance system of the Eerste River Catchment in the greater Stellenbosch area".

The Eerste river and its current condition of are of great concern to Spier. Whilst as a business we endeavor to keep the river clean it is shortsighted not to investigate this opportunity and collaborate with interested and affected parties to finding solutions collectively.

We support your project proposal and are committed to working with you in your research project.

Please do not hesitate to contact me should you required additional information.

Yours sincerely

Heidi Newton-King
Sustainability Director
Tel : 021 809 1964
Email : heidink@spier.co.za

Spier Wine Farm, R310, Stellenbosch, 7600
PO Box 137, Lynedoch, 7603
Tel: +27 (0)21 881 8400 Fax: +27 (0)21 881 3699 www.spier.co.za

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STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

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1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

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3. POTENTIAL RISKS AND DISCOMFORTS

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4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

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Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

Any conversation (interviews, dialogue groups, meetings, the learning journey, presentation and feedback sessions) will be audio taped, and possibly photographed and video taped. The video recordings and photos will be included in my journaling, the audio recordings will be transcribed in my reporting and writing of my paper. The audio files will eventually be destroyed after successful completion of my research.

In the event of necessary sharing or releasing any information that might compromise a participant's (who requires anonymity and confidentiality) identity, in line with my research activities, and it is foreseeable but necessary, I will consult with you to discuss a way or strategy to uphold my commitment to you. I will share information with my primary supervisor, dr Arnold Smit of the University of Stellenbosch Business School in his capacity as my supervisor.

Additionally, I might have to discuss information with the following individuals:
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Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

used as support for educational and presentation purposes in similar cases, feedback to stakeholder groups, and stakeholder participants, as well as in colloquia to academic audiences or interested parties in the water and sustainability discourse.

Records that contain sensitive information that may have, the potential to compromise the participant's anonymity and confidentiality of information, will be destroyed or erased personally and properly after successful submission and completion of the research.

I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [*If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.*]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

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SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

HEIDI NEWTON-KING
Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative   28th January 2013
Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to *Heidi Newton-King* [*name of the subject/participant*] and/or [*his/her*] representatives *Richard Newton-King, Director* [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into _____ by N/A*].

Signature of Investigator   24/01/2013.
Date

Page 6

USB ⣿

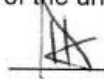University of Stellenbosch Business School

INFORMED CONSENT AGREEMENT

This agreement serves to confirm that the research subject (participant) mentioned below gave her/his consent to participate in a qualitative process study titled, **Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.** The research participant agrees to provide the researcher with his/her experiences and views of the area of research to the best of his/her ability.

The undersigned participant understands the purpose and nature of this study and understands that her/his participation is voluntary and that s/he may stop the interview/compiling solicited essays/memoranda at any time. The participant further grants permission for the data collected to be used in fulfilment of the requirements for the degree **PhD** including a report, and an article to be submitted to University of Stellenbosch, and any future publication(s).

The data collected will be used for research purposes only; the researcher undertakes neither to disclose the identity of any of the participants should they require anonymity, nor the origin of the statements made by any of them. However, the undersigned participant understands that in terms of the ideals of the study's methodology that the researcher is obliged to make use of verbatim statements from the transcribe taped interviews and/or excerpts from solicited essays and/or any other written (e.g reports) or visual (e.g. photographs) in order to illustrate the world of the research participants and their perspectives in the research report.

The participant grants permission for the audio recording and taking photos and that the researcher may also make notes of her/his views and experiences. The participant undertakes to give a true representation of her/his perspective and/or her/his experiences.

I, Heidi Newton-King the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _____

Title, initials & surname: Mrs H Newton-King

Date: 28th January 2013

Place: Stellenbosch

Researcher: Charon Marais
Tel: 0823970769
E-mail: navigator@vodamail.co.za

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

5]   Department Water and Sanitation

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

ENQUIRIES   : M. Lintnaar-Strauss
TELEPHONE   : (021) 941 6178
REFERENCE   : 16/4/G100/6

TO WHOM IT MAY CONCERN

Dear Sir/ Madam

STELLENBOSCH RIVERS COLLABORATIVE

The Department hereby confirms that we are active participants in the research done by PhD Student Ms Charon Marais.

The Department supports the initiative to improve dialogue between different stakeholders as well as to improve the water quality of the rivers in and around Stellenbosch.

The Department is represented at the Steering committee established to drive the project forward.

The Department is committed to provide technical in and if possible financial support to the project.

Yours sincerely

CHIEF DIRECTOR: WESTERN CAPE
DATE: 23 May 2014.

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

The transdisciplinary methodological approach will use action research as a framework to engage with the decision makers and high-level stakeholders closest to the issues, to develop a multi-stakeholder collaborative governance process to deal with the problems around shared use of water in the Eerste River catchment.

If you agree to participate in this study, we would ask you the following things:

The most effective strategies of inquiry and methods to collect empirical material will be analysis of relevant media and in-house documents, explorative interviews, workshops, and dialogues in a period of eight to nine months. A heuristic (exploratory problem-solving and learning techniques) framework will guide a process of observation, reflection and action to realize and optimize a

collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

Records: Media, open source, reports and official documents
Access to official documents will be on a need to know basis and can be discussed and agreed upon with the relevant role players (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, strategic objectives, behaviour, stakeholder and other relations, social responsibility initiatives and compliance philosophy and governance policy. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

Explorative interviews
The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

Learning journeys and presentation of the river issues
It is necessary to visit the sites (the river and different impact points) in groups with the focus on experiencing the situation, and engage with each other around this. These visits will aim to inform and learn. The visits focus on some burning issues such as the Plankenbrug river and Kayamanndi/Enkanini infrastructure on the river, as well as the industrial activities, the town with its students, residents, businesses, tourists, the different confluences of the different subsidiary streams, the general health of the catchment, the landfill and water treatment plant on the Veldwachterspos river, the different participant and stakeholder sites, and general agricultural and industry activities. As time is a restricting variable, the learning journey will be planned with the stakeholders at the first dialogue session to determine how many visits to how many impact points will make sense.

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Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamanndi Tourist Centre, and Spier for a venue.

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The subject will not receive payment.

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- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
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Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

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I, _Lintnaar - Strauss_ the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _Lintnaar - Strauss_

Title, initials & surname: _Melissa Lintnaar-Strauss

Date: 29 April 2013

Place: _Bellville_

Researcher: Charon Marais
Tel: 0823970769
E-mail: navigator@vodamail.co.za

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

6] Western Cape Government Department Environmental Affairs and Development Planning

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

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Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

Any conversation (interviews, dialogue groups, meetings, the learning journey, presentation and feedback sessions) will be audio taped, and possibly photographed and video taped. The video recordings and photos will be included in my journaling, the audio recordings will be transcribed in my reporting and writing of my paper. The audio files will eventually be destroyed after successful completion of my research.

In the event of necessary sharing or releasing any information that might compromise a participant's (who requires anonymity and confidentiality) identity, in line with my research activities, and it is foreseeable but necessary, I will consult with you to discuss a way or strategy to uphold my commitment to you. I will share information with my primary supervisor, dr Arnold Smit of the University of Stellenbosch Business School in his capacity as my supervisor.

Additionally, I might have to discuss information with the following individuals:
- Prof Oliver Williams, my secondary supervisor
- Prof Nico Koopman, dean of the Faculty of Theology, in his capacity as the consultative specialist in the Public Theology and ethics realm
- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
- I will engage the assistance of a co-facilitator for my focus groups, Dieter van deb Broeck from Living Lands.
- assistants with the open space dialogues and dialogue sessions.
- Dialogue groups consisting of the participants in this study
- Open space dialogues and 'focus group' sessions will focus on a broader audience that will not necessarily be restricted to the participant subjects, but will aim to open up dialogue and reflection on the issue of sustainability, and multi-stakeholder collaboration towards a desired governance system for the Eerste River catchment.
- I will also solicit with an objective academic as a confidant and mentor to debrief with me after such sessions in their capacities as academics involved in sustainability and health in communities locally, nationally and globally.
- Academics and specialists closely involved with the water quality dialogue of the two major river basin management projects in Stellenbosch and on the Berg River.

Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

In case of anonymity and confidentiality, specific details that could make a participant identifiable in audio- and visual material and transcribed interviews, will be altered in consultation with the input and consent of the specific participant/s. The participant subject will have the right to review and edit and/or alter any such material, before it is submitted as part of my thesis or used in any publication, presentation, or written or video-/audio report or feedback.

Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

used as support for educational and presentation purposes in similar cases, feedback to stakeholder groups, and stakeholder participants, as well as in colloquia to academic audiences or interested parties in the water and sustainability discourse.

Records that contain sensitive information that may have the potential to compromise the participant's anonymity and confidentiality of information, will be destroyed or erased personally and properly after successful submission and completion of the research.

I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [me/the subject/the participant] by [name of relevant person] in [Afrikaans/English/Xhosa/other] and [I am/the subject is/the participant is] in command of this language or it was satisfactorily translated to [me/him/her]. [I/the participant/the subject] was given the opportunity to ask questions and these questions were answered to [my/his/her] satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

JASON MINGO
Name of Subject/Participant

N/A
Name of Legal Representative (if applicable)

Signature _____ 25/11/2013
Signature of Subject/Participant or Legal Representative   **Date**

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to Jason Mingo [name of the subject/participant] and/or [his/her] representative _____ [name of the representative]. [He/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [Afrikaans/(English)/*Xhosa/*Other] and [no translator was used/this conversation was translated into _____ by _____].

Signature _____ 25/11/2013
Signature of Investigator   **Date**

206

USB

University of Stellenbosch Business School

INFORMED CONSENT AGREEMENT

This agreement serves to confirm that the research subject (participant) mentioned below gave her/his consent to participate in a qualitative process study titled, **Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.** The research participant agrees to provide the researcher with his/her experiences and views of the area of research to the best of his/her ability.

The undersigned participant understands the purpose and nature of this study and understands that her/his participation is voluntary and that s/he may stop the interview/compiling solicited essays/memoranda at any time. The participant further grants permission for the data collected to be used in fulfilment of the requirements for the degree **PhD** including a report, and an article to be submitted to University of Stellenbosch, and any future publication(s).

The data collected will be used for research purposes only; the researcher undertakes neither to disclose the identity of any of the participants should they require anonymity, nor the origin of the statements made by any of them. However, the undersigned participant understands that in terms of the ideals of the study's methodology that the researcher is obliged to make use of verbatim statements from the transcribe taped interviews and/or excerpts from solicited essays and/or any other written (e.g reports) or visual (e.g. photographs) in order to illustrate the world of the research participants and their perspectives in the research report.

The participant grants permission for the audio recording and taking photos and that the researcher may also make notes of her/his views and experiences. The participant undertakes to give a true representation of her/his perspective and/or her/his experiences.

I, ...JASON MINGO...... the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _____

Title, initials & surname: MR. JJ MINGO

Date: 25/11/2013

Place: Property Centre Building, Dorp Street, Cape Town.

Researcher: Charon Marais
Tel: 0823970769
E-mail: navigator@vodamail.co.za

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

Page 1

7]   Cape Nature Conservation

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

The transdisciplinary methodological approach will use action research as a framework to engage with the decision makers and high-level stakeholders closest to the issues, to develop a multi-stakeholder collaborative governance process to deal with the problems around shared use of water in the Eerste River catchment.

If you agree to participate in this study, we would ask you the following things:

The most effective strategies of inquiry and methods to collect empirical material will be analysis of relevant media and in-house documents, explorative interviews, workshops, and dialogues in a period of eight to nine months. A heuristic (exploratory problem-solving and learning techniques) framework will guide a process of observation, reflection and action to realize and optimize a

collaborative governance process with the stakeholders, to deal with and manage the water quality issues in the Eerste River catchment.

Records: Media, open source, reports and official documents
Access to official documents will be on a need to know basis and can be discussed and agreed upon with the relevant role players (i.e such as the strategic manager, the environmental manager, corporate affairs manager) to understand communication strategy, strategic objectives, behaviour, stakeholder and other relations, social responsibility initiatives and compliance philosophy and governance policy. Most documents are available on the web pages of the different stakeholders, and where it is not, will be requested.

Explorative interviews
The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

Learning journeys and presentation of the river issues
It is necessary to visit the sites (the river and different impact points) in groups with the focus on experiencing the situation, and engage with each other around this. These visits will aim to inform and learn. The visits focus on some burning issues such as the Plankenbrug river and Kayamanndi/Enkanini infrastructure on the river, as well as the industrial activities, the town with its students, residents, businesses, tourists, the different confluences of the different subsidiary streams, the general health of the catchment, the landfill and water treatment plant on the Veldwachterspos river, the different participant and stakeholder sites, and general agricultural and industry activities. As time is a restricting variable, the learning journey will be planned with the stakeholders at the first dialogue session to determine how many visits to how many impact points will make sense.

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The aim is to create a public space in the form of deep dialogue sessions, where the stakeholders can engage with the different views and interests around a common problem, and create the opportunity to gain valuable insight and co-produce knowledge and understanding from the broader interests and perspectives.

Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamanndi Tourist Centre, and Spier for a venue.

3. POTENTIAL RISKS AND DISCOMFORTS

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the dialogue sessions, which will be scheduled via e-mail invitations with the different stakeholder communities and role players.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

The process involve multiple stakeholders developing a collaborative governance approach to deal with a shared problem around ecosystems, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

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Additionally, I might have to discuss information with the following individuals:
- Prof Oliver Williams, my secondary supervisor
- Prof Nico Koopman, dean of the Faculty of Theology, in his capacity as the consultative specialist in the Public Theology and ethics realm
- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
- I will engage the assistance of a co-facilitator for my focus groups, Dieter van deb Broeck from Living Lands.
- assistants with the open space dialogues and dialogue sessions.
- Dialogue groups consisting of the participants in this study
- Open space dialogues and 'focus group' sessions will focus on a broader audience that will not necessarily be restricted to the participant subjects, but will aim to open up dialogue and reflection on the issue of sustainability, and multi-stakeholder collaboration towards a desired governance system for the Eerste River catchment.
- I will also solicit with an objective academic as a confidant and mentor to debrief with me after such sessions in their capacities as academics involved in sustainability and health in communities locally, nationally and globally.
- Academics and specialists closely involved with the water quality dialogue of the two major river basin management projects in Stellenbosch and on the Berg River.

Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

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Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

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I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

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8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to me by Charon Marais in Afrikaans and I am in command of this language or it was satisfactorily translated to me. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Jeanne Gouws
Name of Subject/Participant

_N/A_
Name of Legal Representative (if applicable)

[signature]   14/05/2014
Signature of Subject/Participant or Legal Representative   Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _CAPE NATURE_ [*name of the subject/participant*] and/or [his/her] representative _Jeanne Gouws_ [*name of the representative*]. [*He*/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* _____ by _____].

[signature]   14/5/2014
Signature of Investigator   Date

USB ⦂⦂⦂

University of Stellenbosch Business School

INFORMED CONSENT AGREEMENT

This agreement serves to confirm that the research subject (participant) mentioned below gave her/his consent to participate in a qualitative process study titled, **Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.** The research participant agrees to provide the researcher with his/her experiences and views of the area of research to the best of his/her ability.

The undersigned participant understands the purpose and nature of this study and understands that her/his participation is voluntary and that s/he may stop the interview/compiling solicited essays/memoranda at any time. The participant further grants permission for the data collected to be used in fulfilment of the requirements for the degree **PhD** including a report, and an article to be submitted to University of Stellenbosch, and any future publication(s).

The data collected will be used for research purposes only; the researcher undertakes neither to disclose the identity of any of the participants should they require anonymity, nor the origin of the statements made by any of them. However, the undersigned participant understands that in terms of the ideals of the study's methodology that the researcher is obliged to make use of verbatim statements from the transcribe taped interviews and/or excerpts from solicited essays and/or any other written (e.g reports) or visual (e.g. photographs) in order to illustrate the world of the research participants and their perspectives in the research report.

The participant grants permission for the audio recording and taking photos and that the researcher may also make notes of her/his views and experiences. The participant undertakes to give a true representation of her/his perspective and/or her/his experiences.

I, ...Jeanne Gouws...... the undersigned participant, agree to meet at mutually agreeable times and duration(s) or other means of communication, e.g. by e-mail, as reasonably necessary to enable the researcher, Charon Marais to gain a thorough understanding of my experiences and views of the system researched. I further acknowledge that I received a copy of this agreement and that I may contact any one of the under mentioned if I have any subsequent queries.

Signature of research subject: _____

Title, initials & surname: Miss E.J. Gouws

Date: 14/05/2014

Place: Jonkershoek

Researcher: Charon Marais
Tel: 0823970769
E-mail: navigator@vodamail.co.za

Research promoter: Prof Arnold Smit.
Tel: (021) 918 4404
Cell: 083 301 8713
E-mail: Arnold.Smit@usb-ed.com

8]   World Wildlife Fund South Africa

WWF South Africa World Wide Fund For Nature	Reg. No: 003-226 NPO VAT NO: 4820122481 Web: www.wwf.org.za
Head Office: Boundary Terraces Bridge House, 1st Floor Mariendahl Lane NEWLANDS 7700 P O Box 23273 CLAREMONT 7735 Tel: +27 21 657 6600 Fax: 086 535 9433	**Gauteng Office:** Ground Floor President Place 1 Hood Avenue ROSEBANK 2196 Postnet Suite 436 Private Bag X9 BENMORE 2010 Tel: +27 11 447 1213 Fax: +27 11 447 0365

12 May 2014

To whom it may concern,

On behalf of WWF-South Africa, in my capacity as senior manager of Freshwater Programmes, I , Christine Colvin, agree to the participation of WWF-SA in the research of Ms Charon Marais on collaboration for water stewardship in the greater Stellenbosch area and the Eerste River catchment.

Sincerely,

Christine Colvin
:: Senior Manager, Freshwater Programmes WWF-SA ::
1st Floor, Bridge House, Boundary Terraces
Mariendahl Lane, Newlands, P.O.Box23273, Claremont 7735, South Africa.
Tel: +27 (021 6576600) **Direct:** +27 (021 6576639) **Mobile:** (0834629619)
Fax: 086 535 9433 **Skype:** christine-colvin **Email:** ccolvin@wwf.org.za
Web: http://www.wwf.org.za   www.journeyofwater.co.za   (hyperlink)

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot • your knowledge partner

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Towards a sustainable governance system of the Eerste River Catchment in the Greater Stellenbosch Area.

You are asked to participate in a doctoral research study conducted by Charon Marais (MBA, B. Admin), from Economic and Management Sciences. The results of this research are part of my PhD thesis and published articles. You and your organization/business/entity was selected as a participant in this study because of your involvement and/or vested interests as decision maker in the governance issues around shared use of water in the Eerste River catchment. Your participation is necessary to understand the issues and challenges from the different organizational perspectives.

1. PURPOSE OF THE STUDY

The purpose of the study is to develop a governance process within which stakeholders from different power structures and ethical perspectives can collaborate to manage issues of shared use of water in the Eerste River catchment.

2. PROCEDURES

The study is subject to the emergent sustainable development dynamics in the Greater Stellenbosch. The causes of the Stellenbosch Municipality's complex infrastructure challenges have alarming effects on the Stellenbosch economy and brand. These challenges mark a long history of conflict and contestation between local government, the agriculture sector and business over the shared water issues in the Eerste River catchment. My project engages in a narrative discourse with decision makers and policy makers as stakeholders in their different capacities in business, government, NGO's, and community-based organizations, to collectively gain a deep understanding of the problems and challenges, and of the concepts compliance and stewardship in their governance approach in Stellenbosch.

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Explorative interviews
The goal of these interviews is to establish relationships and common ground with the participants and open up and hold a space where stakeholders can engage with each other, the researcher and the common problem, and to collaborate and act around a common interest. These interviews are with key role players (i.e operations management) and scheduled as the case study progresses.

Dialogue interviews and dialogue groups
Will follow once the space is ready for interaction by the stakeholders. Dialogue interviews engage the stakeholders in smaller groups with specific focus as the issues and challenges emerge. Dialogue allows for richer interpretations of perspectives, and will follow a workshop to explore emerging issues and challenges further towards solutions. It is possible to do at least one a month from April for the next 8 months. These dialogue sessions will require at least 3 hours per session.

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The aim is to create a public space in the form of deep dialogue sessions, where the stakeholders can engage with the different views and interests around a common problem, and create the opportunity to gain valuable insight and co-produce knowledge and understanding from the broader interests and perspectives.

Attendance of relevant meetings
For the purposes of the study it is important to also have observer status at relevant meetings between stakeholders, and of the board, directors, management and other, pertaining to the company's perspectives and response on sustainability.

Venue
At this stage I have no idea what facilities will be at my disposal, but it makes sense to rotate the group dialogues between the participant sites. As far as the dialogue sessions is concerned, I will liaise with the municipality, Kayamandi Tourist Centre, and Spier for a venue.

3. POTENTIAL RISKS AND DISCOMFORTS

I do not foresee any risks, except a health and safety risk with the learning journey visits. I will liaise with the municipality, and discuss these risks with the participants. The dialogue group meetings will be scheduled in advance, and follow the principle that the right people will attend when they attend. The same principle will be followed with the dialogue sessions, which will be scheduled via e-mail invitations with the different stakeholder communities and role players.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are a multitude of platforms, projects and initiatives around the Sustainable Stellenbosch Initiative, but evidently not cohesive at all. This study aims to bridge the gap between the many different attempts and projects on the river water quality issue, in a community with different stakeholders, interests and institutional approaches.

The process involve multiple stakeholders developing a collaborative governance approach to deal with a shared problem around ecosystems, which can expand to other similar issues regarding a sustainable Stellenbosch, and influence policies towards an inclusive sustainable Stellenbosch collaboration around shared resource.

Relationships are transformed as stakeholders are empowered to get involved in developing a partnership approach to manage shared problems around ecosystems.

5. PAYMENT FOR PARTICIPATION

The subject will not receive payment.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. I will do my utmost to uphold confidentiality and anonymity, if so required. Confidentiality will be maintained by means of using a code and/or pseudonyms in transcripts and beyond for each participant who desires to remain anonymous in the results that will contribute to any research paper, and my thesis.

This research focus on multi-stakeholder collaboration, therefore, if a participant wants to uphold its anonymity, and assesses such collaboration to have the potential to compromise the participant's anonymity and confidentiality by participating and sharing views and information, a separate agreement to meet the requirement for confidentiality and anonymity in such case needs to and will be drawn up and co-signed by the other participants.

Reports, access gained to information in writing or notes made at or after in-house proceedings and meetings as a participant observer, interview recordings, transcripts and participant contact details will be stored separately in a file with a password on my personal desktop as well as my personal hard disk (to backup my information) dedicated to this particular desktop at home. Any

hard copies and other confidential information in print will be stored in a confidential file in my personal cabinet at home in my study.

Any conversation (interviews, dialogue groups, meetings, the learning journey, presentation and feedback sessions) will be audio taped, and possibly photographed and video taped. The video recordings and photos will be included in my journaling, the audio recordings will be transcribed in my reporting and writing of my paper. The audio files will eventually be destroyed after successful completion of my research.

In the event of necessary sharing or releasing any information that might compromise a participant's (who requires anonymity and confidentiality) identity, in line with my research activities, and it is foreseeable but necessary, I will consult with you to discuss a way or strategy to uphold my commitment to you. I will share information with my primary supervisor, dr Arnold Smit of the University of Stellenbosch Business School in his capacity as my supervisor.

Additionally, I might have to discuss information with the following individuals:
- Prof Oliver Williams, my secondary supervisor
- Prof Nico Koopman, dean of the Faculty of Theology, in his capacity as the consultative specialist in the Public Theology and ethics realm
- the transcriber of my recorded data, discussions, interviews, dialogues in focus groups and open spaces, etc.
- I will engage the assistance of a co-facilitator for my focus groups, Dieter van deb Broeck from Living Lands.
- assistants with the open space dialogues and dialogue sessions.
- Dialogue groups consisting of the participants in this study
- Open space dialogues and 'focus group' sessions will focus on a broader audience that will not necessarily be restricted to the participant subjects, but will aim to open up dialogue and reflection on the issue of sustainability, and multi-stakeholder collaboration towards a desired governance system for the Eerste River catchment.
- I will also solicit with an objective academic as a confidant and mentor to debrief with me after such sessions in their capacities as academics involved in sustainability and health in communities locally, nationally and globally.
- Academics and specialists closely involved with the water quality dialogue of the two major river basin management projects in Stellenbosch and on the Berg River.

Activities such as interviews, discussions, visits to sites, learning journeys, focus group sessions with the stakeholder participants, open space sessions between the participant and other stakeholders, workshop sessions with a broader stakeholder audience, presentations to stakeholder participant individuals and groups, and academia both internationally and in the Stellenbosch University fraternity of the Faculty of Theology, Sustainability Institute and the Business School, School for Public Leadership or any other colloquia will be audio- or video recorded and photographed as far as possible for journaling and transcribing purposes, and to support my documenting of my empirical data collection of the case study.

In case of anonymity and confidentiality, specific details that could make a participant identifiable in audio- and visual material and transcribed interviews, will be altered in consultation with the input and consent of the specific participant/s. The participant subject will have the right to review and edit and/or alter any such material, before it is submitted as part of my thesis or used in any publication, presentation, or written or video-/audio report or feedback.

Where recordings (video and audio) are not transcribed verbatim (with alterations when and where required), it will be transferred to a dvd/cd and attached to my thesis. The same

used as support for educational and presentation purposes in similar cases, feedback to stakeholder groups, and stakeholder participants, as well as in colloquia to academic audiences or interested parties in the water and sustainability discourse.

Records that contain sensitive information that may have the potential to compromise the participant's anonymity and confidentiality of information, will be destroyed or erased personally and properly after successful submission and completion of the research.

I plan to publish the results of my study, and will uphold my commitment to use pseudonyms and codes to protect the identity and confidentiality of participant subjects in the study, where such an agreement is in place.

I will inform participant subjects and stakeholders prior to any publishing.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. [*If appropriate, describe the anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.*]

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact me or my supervisor, dr Arnold Smit. The contact details are:

Charon Marais (researcher)
navigator@vodamail.co.za
PhD student: Sustainability: Transformational corporate governance
P.O. Box 967, Somerset West, 7129
Tel/faks: 021-852 9034 (home)
Cel: 082 397 0769

Dr Arnold Smit (supervisor)
Arnold.Smit@usb-ed.com
Director: Centre for Business in Society
University of Stellenbosch Business School
PO Box 610, Belville, 7535, South Africa
Tel: 021-918 4404
Fax: 021-9184478
Cel: 083 301 8713

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

C. Cdom

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative   1 – 11 – 13   **Date**

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to Christine Colvin [*name of the subject/participant*] and/or [*his/her*] representative NA [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* NA *by*].

Signature of Investigator   1/11/2013   **Date**

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APPENDIX 6 – ACKNOWLEDGEMENT LETTER

Acknowledgement Letter

New Application

05-Nov-2014

Marais, Charon CL

Ethics Reference #: DESC/Marais/July2014/58

Title: Stakeholder responsibility in corporate governance: Towards a framework for assessing and applying strategy for sustainability.

Dear Ms Charon Marais

We acknowledge receipt of the following:

Thank you for submitting this research proposal to the REC for review and for transparently acknowledging that the data to be used for this study was collected prior to REC ethics review.

The REC acknowledges that you have displayed an awareness of the ethics principles of research in your communication with the REC. The REC further acknowledges that you have conducted the research in an ethical manner and that participants involved in the research were fully aware of the risks and benefits of their participation in this study.

Unfortunately the REC cannot provide retrospective ethics approval and thus the final decision as to whether the results of the study can be published in a scientific journal lies with the editor of the publication. Furthermore, the final decision as to whether or not this degree is awarded lies with the Faculty.

 If you have any questions or need further assistance, please contact the HREC office at 218089183

Sincerely,

Clarissa Graham

REC Coordinator

Research Ethics Committee: Human Research (Humanities)

APPENDIX 7 - TERMS OF REFERENCE: SRC

TERMS OF REFERENCE

1. PURPOSE

The Stellenbosch River Collaborative (hereafter referred to as "SRC") is a collaborative of like-minded organisations and people concerned about the deteriorating water quality and riverine environment of the rivers in the Eerste River catchment. As stewards of this space our aim is to develop a collaborative governance response to the water quality issues and the environment in the catchment. Guided by this long-term view, we will investigate and implement agreed actions and adopt a "learning by doing" approach to meet the action orientation of the group.

2. MANDATE

The SRC will be an overarching and interactive group that will provide input and guidance into other projects, structures, processes that assist in fulfilling our purpose.
Over and above the influencing and consultative role there will be a strong focus on the identification and implementation of relevant catchment specific projects

3. COMPOSITION AND STRUCTURE

The SRC will consist of two structures; a steering committee (SRC-SC) and a broader stakeholder forum (SRC-SF).

3.1 Steering committee (SRC-SC)

The steering committee is a formal structure and will consist of influencers and decision makers that can/will strategically collaborate in fulfilling our purpose and mandate.

The Steering committee will initially consist of representatives of the following founding member organizations (hereafter referred to as "members"):

o Spier
o Distell
o WWF
o Stellenbosch Municipality
o University of Stellenbosch
o Department of Water and Sanitation
o Department of Agriculture (Provincial)
o Department of Environmental Affairs and Development Planning
o Cape Nature
o Wynland Water - Water user associations

A Chairperson and Co- Chairperson of the Steering Committee will be elected by the members of the Steering committee. The Chairperson and Co-Chairperson will hold office for a maximum of 2 years after which new office bearers must be elected.

3.2 Stakeholder forum (SRC-SF)

The stakeholder forum is a broader grouping of stakeholders that are interested in and or affected by the water quality and riverine environment of the Eerste River catchment. This forum is open to all Interested and Affected Parties (IAP's) wishing to take part, provide input or make a contribution towards the purpose of the SRC. Any stakeholder forum member who shows through their commitment and ability to influence a process that could assist the SRC to fulfil their purpose and mandate could be invited by the SRC-SC to join the SRC- SC. This forum will meet quarterly where the SRC-SC will communicate progress made in terms of their mandate. SRC-SF stakeholders will have the opportunity to provide input following the agreed procedure.

4. FUNCTIONS

The functions of the SRC-SC will be to –

- Implement our mandate by or though the identification of processes, projects or structures through which we could collaborate to assist us in fulfilling our purpose. i.e. CMA development, the IIC and Berg River Partnership;
- The SRC-SC will identify a responsible person to represent it at the identified process, project or structures;
- Identify priority areas for river rehabilitation, restoration and water quality improvement within the catchment;
- Identify, facilitate and develop implementation projects/opportunities on management of river rehabilitation programmes;
- Manage and direct the activities of the secretariat;

- Guide implementation or project agents e.g. Living Lands, Wildlands Conservation Trust others in line with the purpose and mandate of the SRC as well as within the framework of any formal third part agreements;
- Create awareness and provide education; and
- Source funding to fulfill the mandate.

5. GENERAL RESPONSIBILITIES

The members of the SRC- SC are expected to:

- Be a custodian of the rivers;
- To participate equally with the other SRC-SC member in the execution of the mandate of the SRC-SC
- Act in good faith, and be constructive in their participation in the activities and discussion of the SRC - SC;
- Afford all members an equal opportunity to raise and discuss issues;
- Reach decisions by consensus;
- Support decision reached and recommend that their institutions support the execution of decisions adopted at meetings understanding that a decision taken at the SRC- SC is not binding on the represented institutions;
- Instil and promote good governance practices promoting sound financial and operational management through its transparency, participation, responsiveness, oversight, and accountability;
- Keep a level of confidentiality of matters discussed, and respect requests for complete confidentiality on matters to remain amongst member institutions;
- Attend meetings of the SRC- SC, however, in the event that members are unable to attend, they are to tender their apologies or allow for a representative to attend through a notice to the secretariat of the SRC - SC;
- Provide relevant information required/requested by the SRC-SC accurately and timeously;
- Give regular feedback to the institutions being represented on the activities of the SRC- SC.

6. STANDING RULES OF ORDER

The SRC-SC shall allow for adaptation of its rules as required.

6.1 Chairmanship

6.1.1 The Chairpersons of the SRC-SC and SRC-SF will be elected by the SRC-SC.

6.1.2 The SRC-SC has the discretion to co-opt additional members to serve on the SRC-SC, either as permanent members or to render specialist advice/support as the need arises. Please refer to 3.2.

6.1.3 If either of the Co-Chairs are absent or unable to act for any reason, a nominated member of the SRC-SC will stand in to assist.

6.2 Secretariat

6.2.1 A member organization of an external entity may be appointed to perform the secretariat function. Funding will be sourced to finance the secretariat.
The secretariat is required to ensure they have the capacity and skills sets required to deliver the following services:

(i)   Calendar Management
(ii)   Give written notice of meetings;
(iii)   Keep an attendance register;
(iv)   Write and send out minutes;
(v)   Draw up an agenda in line with the order of business;
(vi)   Ensure flow of information between members, and
(vii) Deal with correspondence and communication in line with SRC-SC's position/decisions.
(viii) Facilitate and organize workshops, field trips and communication of events and learning under the direction of the SRC-SC
(ix)   Assist the SRC-SC in identifying collaboration opportunities, identification of new relationships, funding partners and implementation partners
(x)   Develop and manage stakeholder mapping.
(xi)   Manage the linkages between the projects
(xii) Provide the capacity in the process for the completion of the PHD Research Project that initiated the SRC.

7. SCHEDULING OF MEETINGS

7.1 Meetings are to be hosted as determined by the Chairperson in conjunction with the members to execute it duties as set out in the Terms of Reference Document. Quarterly meeting will be held for the SRC-SF and minutes circulated within two weeks after the meeting(s) to expedite action in the field.

7.2 Specific meetings can be convened to address URGENT matters.

7.3 Apologies or non-attendance of scheduled meetings should be made in writing to the secretariat.

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8. PROCEDURE FOR MEETINGS

8.1 The SRC-SC will agree on the procedure considering normal acceptable meeting procedure and principles.

8.2 The SRC-SC and SRC-SF is not a bargaining forum, hence decisions will be made by consensus, but in the absence of consensus the majority vote will apply.

8.3 The chairperson must facilitate the discussions at the meeting and the time allowed for each agenda point. He/she will see that "sufficient" discussions take place before a decision is made, repeat the decision for the secretary to minute and close discussions on that item. It is his/her responsibility to regulate the time spent for the meeting to be efficient and effective.

8.4 The SRC-SC secretariat will be responsible for proper recording of proceedings, attendance of meetings and resolutions adopted by the SRC-SC.

8.5 Each member organisation will have one vote. Special attendees and guests will not be eligible to vote.

9. ORDER OF BUSINESS

9.1 The order of business of the meeting will be as follows:

1. Opening
2. Present and apologies
3. Adoption of the Agenda
4. Adoption of the minutes of the previous meeting
5. Matters arising from the minutes of the previous meeting
6. Business issues
7. Feedback Reports from Implementation Agents and Project Managers
8. Feedback from all Organisations represented
9. Additional matters placed on the agenda by SRC-SC members
10. Date of next meeting
11. Closure

9.2 The Chairperson may give preference to any item on the agenda with the consent of the meeting.

9.3 The Chairperson may as a matter of urgency or necessity accept a request to discuss a matter not on the agenda with the agreement of the meeting.

10. CODE OF CONDUCT

All members are expected to:

10.1 Actively participate in all meetings.

10.2 Declare and disclose any interest (financial or other) pertaining to projects listed for consideration. The Chairperson may request any member to be excused from the discussion of any matter where such an interest has been declared, with the consent of the meeting.

10.3 Have a "Cabinet Approach" to decisions taken at the meeting – members have to go out and speak the same language and refer to Task Team decisions and not individual opinions.

10.4 Respect all views and contributions.

10.5 Come prepared; give constructive inputs in order to add value to the discussions.

11. AMMENDMENTS TO THIS DOCUMENT

This document will be reviewed annually and amended when needed by the SRC-SC members.

12. APPROVAL OF TERMS OF REFERENCE

The Terms of Reference was approved by the members of the SRC-SC on 21 January 2015 at Spier in Stellenbosch.

....
Heidi Newton-King   Jacques Rossouw
Co- Chairperson   Co-Chairperson